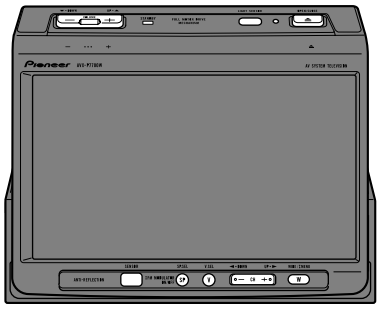
Service Manual



ORDER NO.
CRT2509

7 INCH WIDE IN-DASH FULL MOTORIZED LCD COLOR TV

AVX-P7700W ES

● High voltage is generated in the inverter when the power is supplied to the system. To avoid an electric shock, reconfirm that the power switch is set to OFF before starting operation.

CONTENTS

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PIONEER EUROPE N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

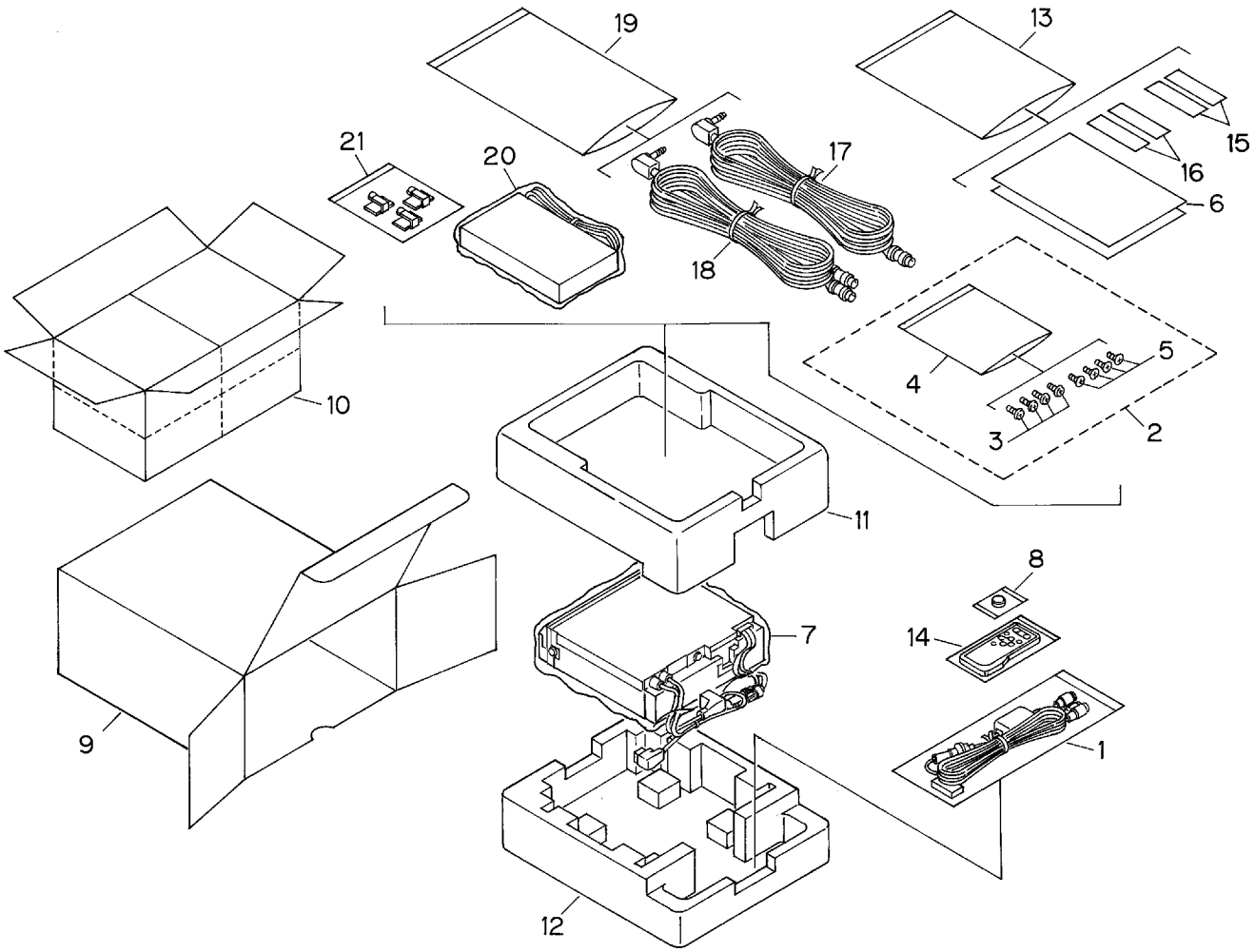
K-ZZD. APR. 2000 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING



NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

● PACKING SECTION PARTS LIST

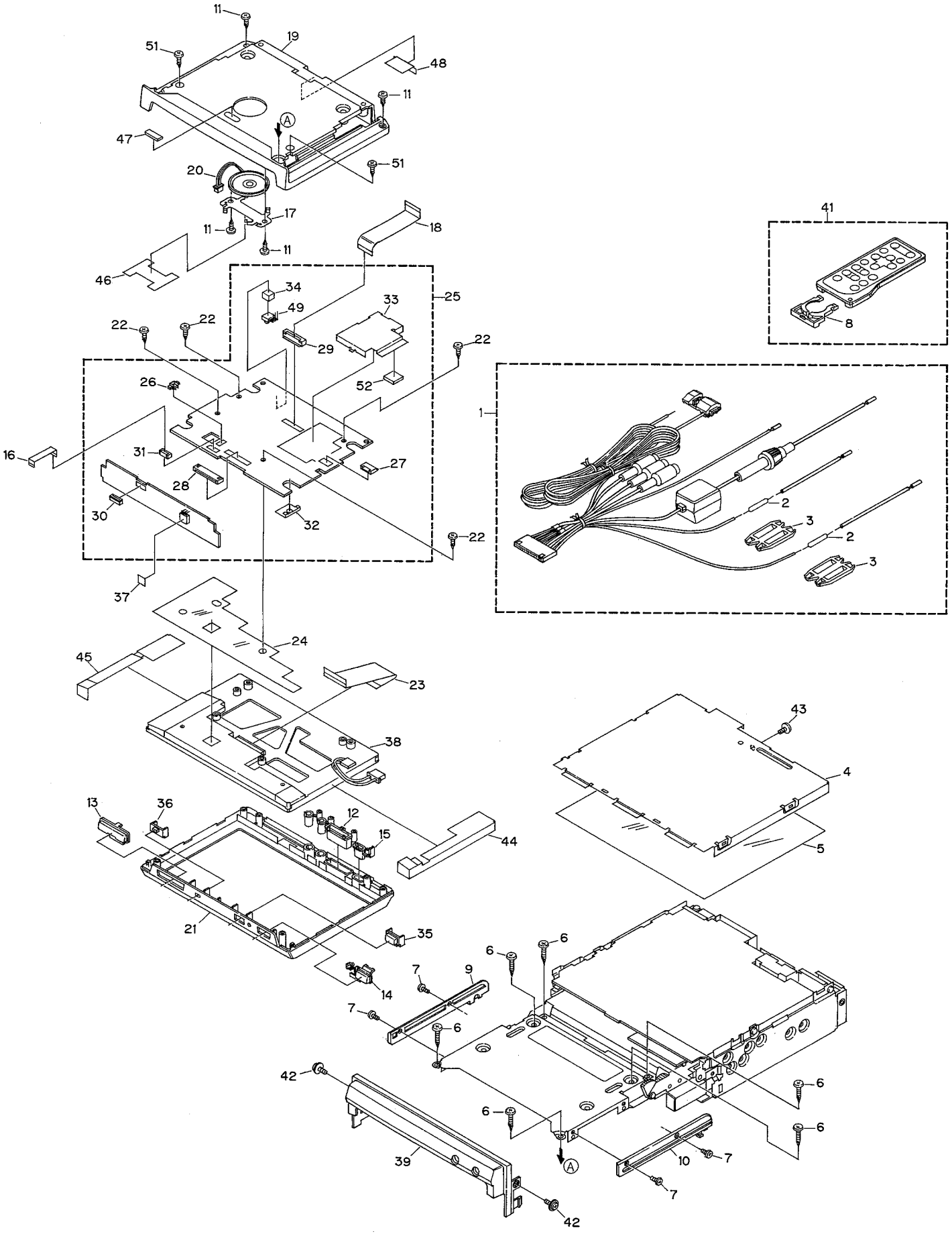
Mark	No.	Description	Part No.
	1	Cord Assy	CDE6325
	2	Screw Assy	CEA2145
	3	Screw	BMZ50P060FMC
*	4	Polyethylene Bag	CEG-127
	5	Screw	CMZ50P060FMC
	6-1	Owner's Manual	CRD3250
	6-2	Installation Manual	CRD3251
	7	Polyethylene Bag	CEG-162
	8	Battery	CEX1030
	9	Carton	CHG4096
	10	Contain Box	CHL4096
	11	Protector	CHP2287
	12	Protector	CHP2288
	13	Polyethylene Bag	CEG1116
	14	Remote Control Unit	CXB5712
	15	Fastener	CNM6888
	16	Fastener	CNM6889
	17	Cord Assy	CDE6372
	18	Cord Assy	CDE6373
*	19	Cover	CEG1155
	20	Polyethylene Bag	CEG1260
	21	Cord Clamper Assy	CEA2637

● Owner's Manual, Installation Manual

Model	Part No.	Language
AVX-P7700W/ES	CRD3250	English, Korean, Chinese
	CRD3251	

AVX-P7700W

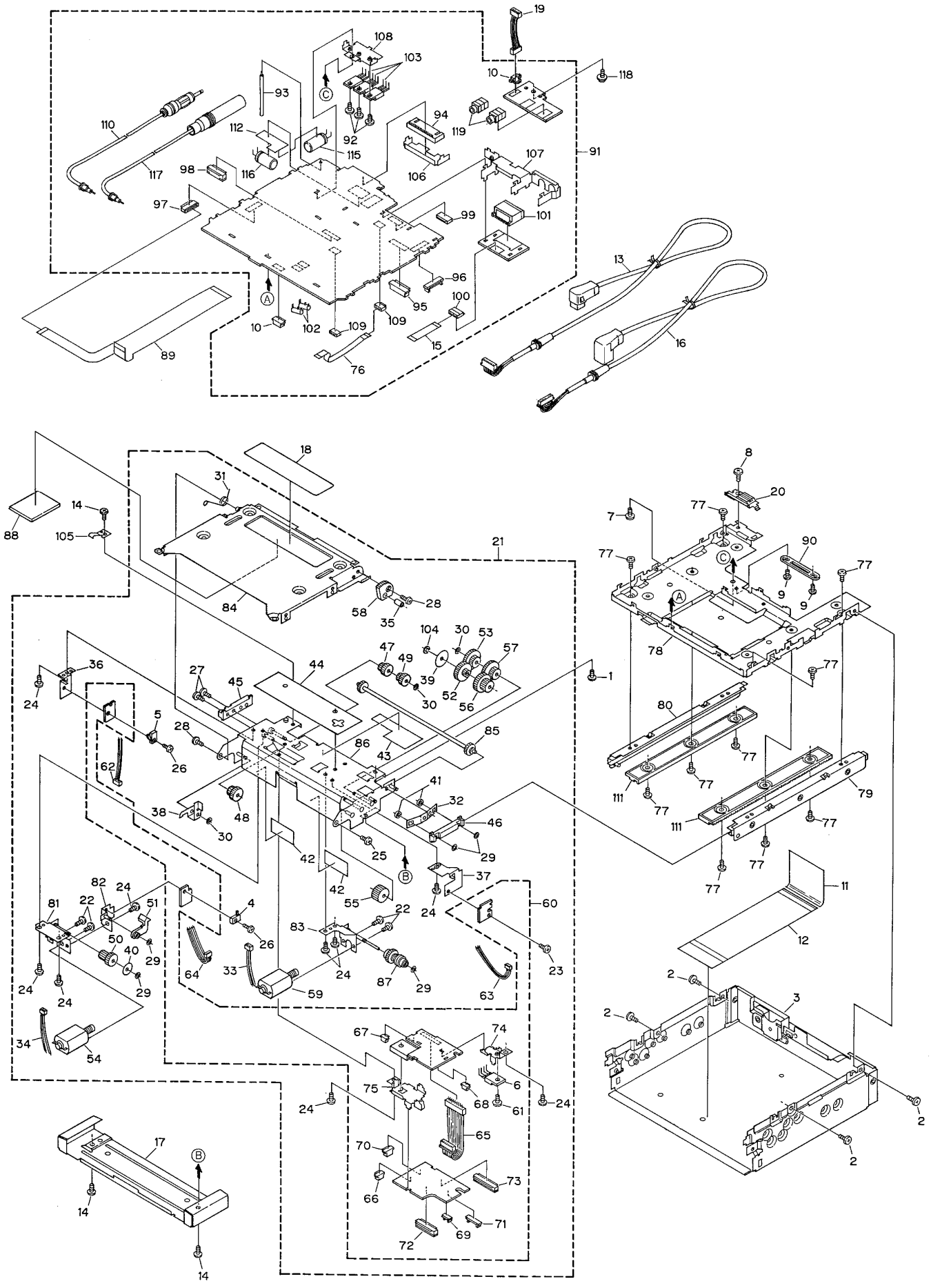
2.2 EXTERIOR(1)



● EXTERIOR(1) SECTION PARTS LIST

Mark No.	Description	Part No.
1	Cord Assy	CDE6325
2	Resistor	RS1/2PMF102J
3	Cap	CNS1472
4	Case	CNB2307
5	Insulator	CNM5750
6	Screw	BPZ26P160FZK
7	Screw(M2×4)	CBA1378
8	Cover	CNS4948
9	Rail L	CNS4929
10	Rail R	CNS4930
11	Screw	BPZ20P060FZK
12	Button(SP, V, CH)	CAC6671
13	Button(VOLUME)	CAC6669
14	Button(OPEN/CLOSE)	CAC6670
15	Button(W)	CAC6209
16	FFC	CDE5615
17	Holder	CNC7283
18	PCB	CNP5293
19	Case	CNS6029
20	Speaker	CPV1049
21	Grille Unit	CXB5764
22	Screw	BPZ20P060FZK
23	FFC	CDE5616
24	Insulator	CNM5754
25	Monitor Unit	CWM7196
26	Connector(CN1071)	CKS3124
27	Connector(CN1201)	CKS3192
28	Connector(CN1751)	CKS3529
29	Connector(CN1061)	CKS3929
30	Connector(CN1802)	CKS3964
31	Connector(CN1801)	CKS4130
32	Earth Plate	CNC7837
33	Shield	CNC7876
34	Spacer	CNM5748
35	Cover	CNV6233
36	Lighting Conductor	CNV6234
37	Filter	CNM6583
38	LCD Module	CWX2497
39	Grille	CNS6067
40	•••••	
41	Remote Control Unit	CXB5712
42	Screw	IMS26P030FZK
43	Screw	BSZ30P050FMC
44	Cover	CNM5976
45	Cover	CNM5977
46	Insulator	CNM6016
47	Cushion	CNM6017
48	Cover	CNM5978
49	IC(IC1801)	SBX8035-H
50	•••••	
51	Screw(M2.3×6)	CBA1461
52	Cushion	CNM6073

2.3 EXTERIOR(2)

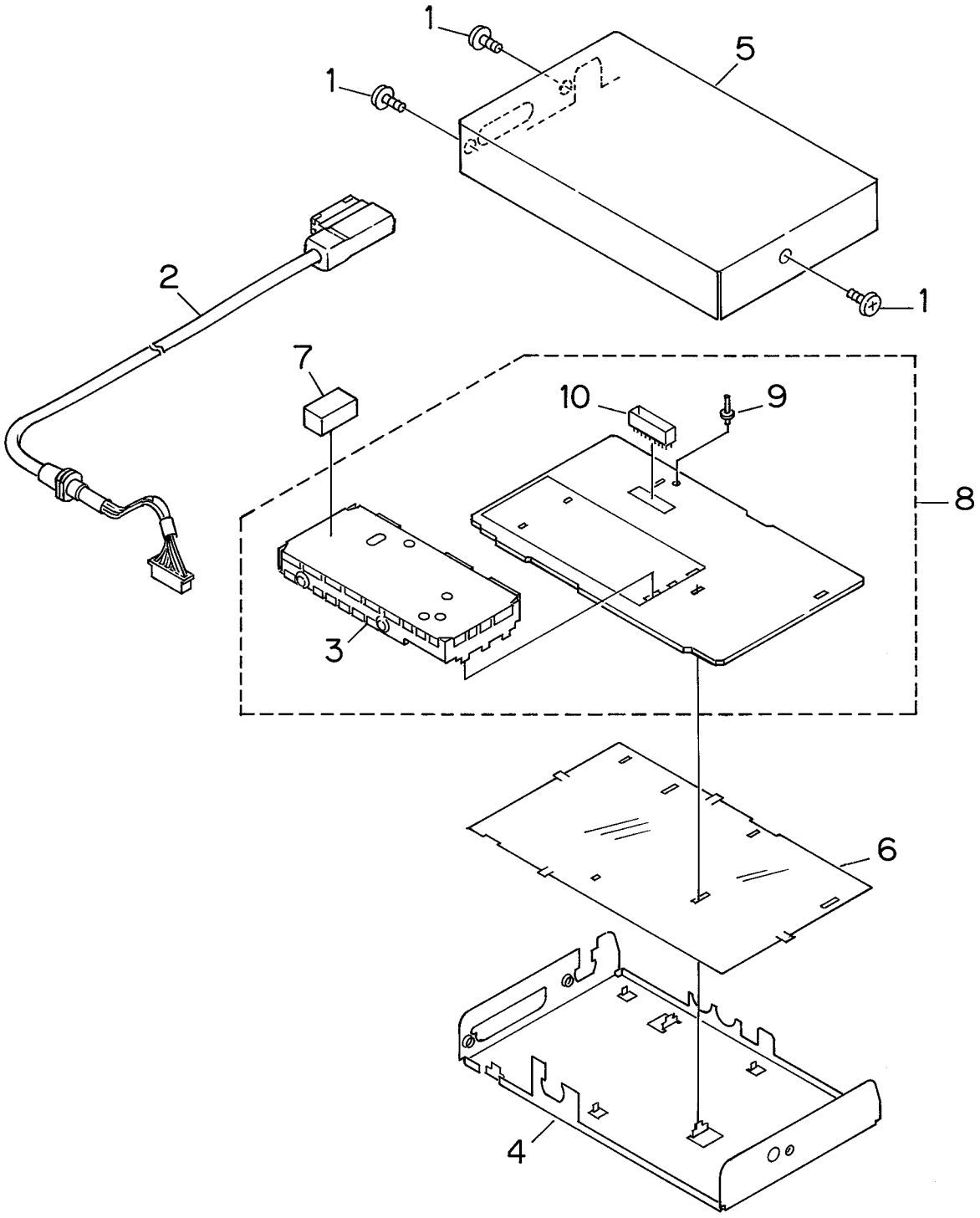


● EXTERIOR(2) SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BMZ20P035FMC
2	Screw	BSZ30P050FMC
3	Chassis Unit	CXB2503
4	Switch(S1041)	CSN1012
5	Switch(S1021)	CSN1025
6	IC(IC1951)	PQ09RA11
7	Screw	BMZ30P060FMC
8	Screw	BMZ30P060FMC
9	Screw(M2×2)	CBA1250
10	Connector(CN764,767)	CKS3127
11	Sheet	CNM5820
12	Sheet	CNM5841
13	Cord Assy	CDE5610
14	Screw(M2×4)	CBA1378
15	FFC	CDE5980
16	Cord Assy	CDE6326
17	Cover	CNC7723
18	Sheet	CNM5747
19	Cord Assy	CDE6327
20	Holder	CNC7731
21	Drive Mechanism Assy	CXB4323
22	Screw	BMZ20P020FMC
23	Screw(M2×3)	CBA1077
24	Screw(M2×2.5)	CBA1371
25	Screw(M2×8)	CBA1373
26	Screw(M2×7)	CBA1376
27	Screw(M2.6×8)	CBA1385
28	Screw(M2×5)	CBA1450
29	Washer	CBF1038
30	Washer	CBF1039
31	Spring	CBH2109
32	Spring	CBL1256
33	Connector	CDE4732
34	Connector	CDE5137
35	Shaft	CLA2903
36	Bracket	CNC6502
37	Bracket	CNC6707
38	Arm	CNC8599
39	Sheet	CNM4779
40	Sheet	CNM4780
41	Spacer	CNM5154
42	Insulator	CNM5749
43	Insulator	CNM5751
44	Sheet	CNM5840
45	Guide	CNV4569
46	Guide	CNV4570
47	Gear	CNV4572
48	Gear	CNV4573
49	Gear	CNV4574
50	Gear	CNV4575
51	Arm	CNV4576
52	Gear	CNV4580
53	Gear	CNV4581
54	Motor Unit(M1951)	CXB3228
55	Gear	CNV5432
56	Gear	CNV5433
57	Gear	CNV5434
58	Gear	CNV5435
59	Motor Unit(M1952)	CXB3229
60	Encoder Unit	CWM6479
61	Screw	BMZ30P060FMC
62	Connector	CDE4732
63	Connector	CDE5088
64	Connector	CDE5095
65	Cord Assy(CN1951)	CDE5673
66	Connector(CN1011)	CKS3124
67	Connector(CN1952)	CKS3124
68	Connector(CN1953)	CKS3124
69	Connector(CN1012)	CKS3125
70	Connector(CN1013)	CKS3126
71	Connector(CN1051)	CKS3132
72	Connector(CN1014)	CKS3929
73	Connector(CN1001)	CKS3930
74	Bracket	CNC7726
75	Holder	CNC7835
76	FFC	CDE6388
77	Screw(M2×3)	CBA1077
78	Frame	CNC9023
79	Rail Unit	CXB2508
80	Rail Unit	CXB2507
81	Bracket Unit	CXA8990
82	Bracket Unit	CXA9007
83	Bracket Unit	CXA9679
84	Case Unit	CXB4397
85	Gear Unit	CXB2505
86	Frame Unit	CXB2506
87	Torque Limiter Unit	CXB2526
88	Cover	CNM5984
89	PCB	CNP5302
90	Holder	CNV5345

Mark	No.	Description	Part No.
	91	Mother Unit	CWM7194
	92	Screw	BMZ30P050FMC
	93	Clamper	CEF1009
	94	Connector(CN911)	CKM1281
	95	Connector(CN752)	CKS3133
	96	Connector(CN751)	CKS3134
	97	Connector(CN702)	CKS3774
	98	Connector(CN701)	CKS3808
	99	Connector(CN761)	CKS4067
	100	Connector(CN762)	CKS4131
	101	Connector(CN763)	CKS4367
	102	Antenna Jack(CN491,492)	CKX1010
	103	Transistor(Q913,971,975)	2SD2396
	104	Washer	YE20FUC
	105	Spring	CBL1277
	106	Holder	CNC7730
	107	Holder	CNC7810
	108	Holder	CNC8023
	109	Connector(CN765,766)	CKS3752
	110	Antenna Cable	CDH1288
	111	Lack	CNV5410
	112	Insulator	CNM5993
	113	•••••	
	114	•••••	
	115	Capacitor(C901)	CEHAT102M16
	116	Capacitor(C552)	CEHAT102M16
	117	Antenna Cable	CDH1292
	118	Screw	IMS30P040FMC
	119	Jack(CN768,769)	CKN1030

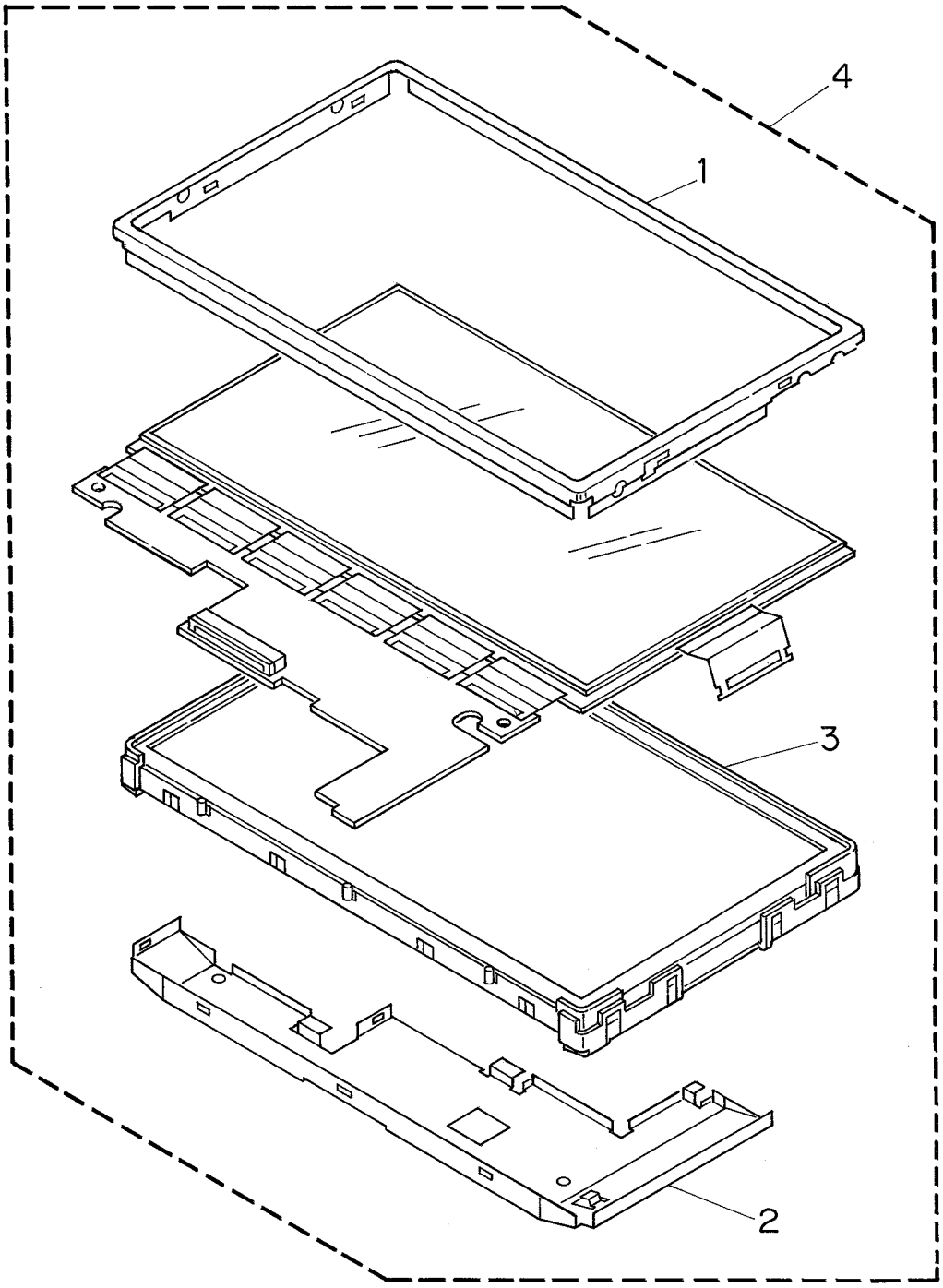
2.4 HIDEAWAY ASSY



● HIDEAWAY ASSY SECTION PARTS LIST

Mark No.	Description	Part No.
1	Screw	BSZ30P040FZK
2	Cord Assy	CDE6332
3	TV Front End(FE4401)	CWB1085
4	Chassis	CNA2299
5	Case	CNB2580
6	Insulator	CNM6725
7	Gasket	CNM6924
8	Hideaway Unit	CWM7195
9	Terminal	CKF-047
10	Connector(CN2471)	CKS3236

2.5 LCD MODULE

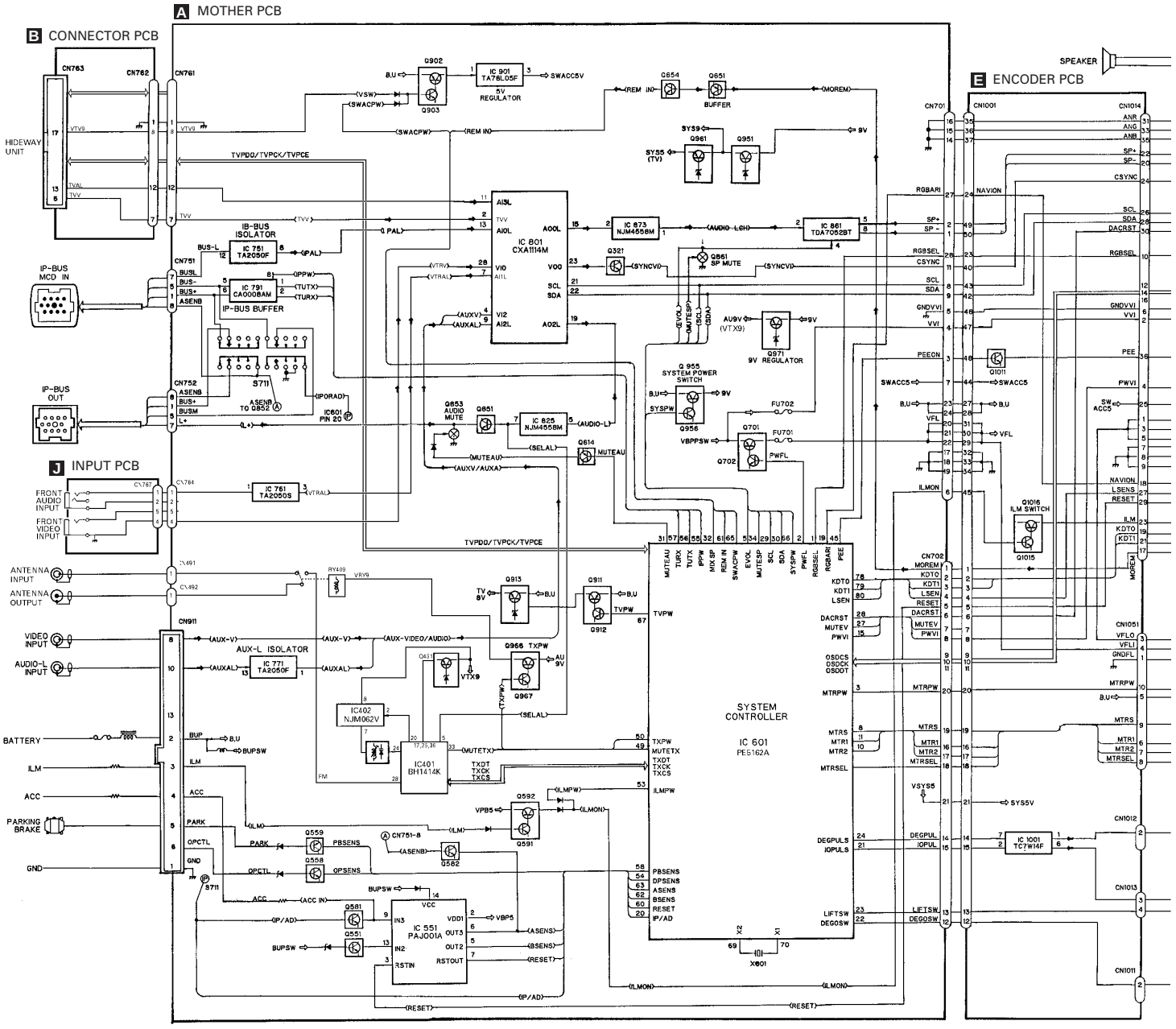


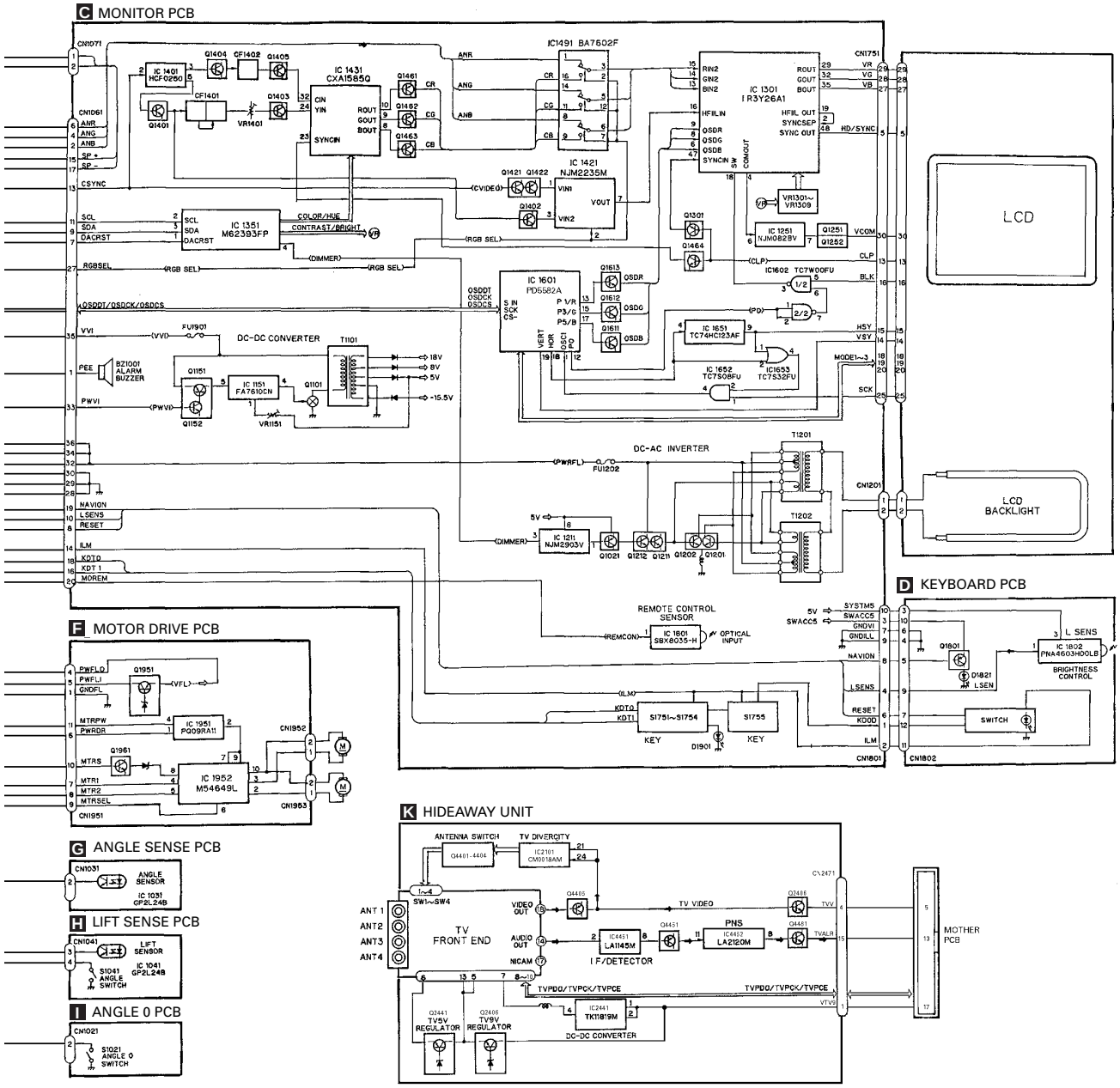
● LCD MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Front Case	NML558388FKO
	2	Back Case	NML558388BKO
	3	Back Light Unit	NML758388111
	4	LCD Module	CWX2497

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

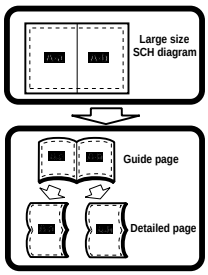


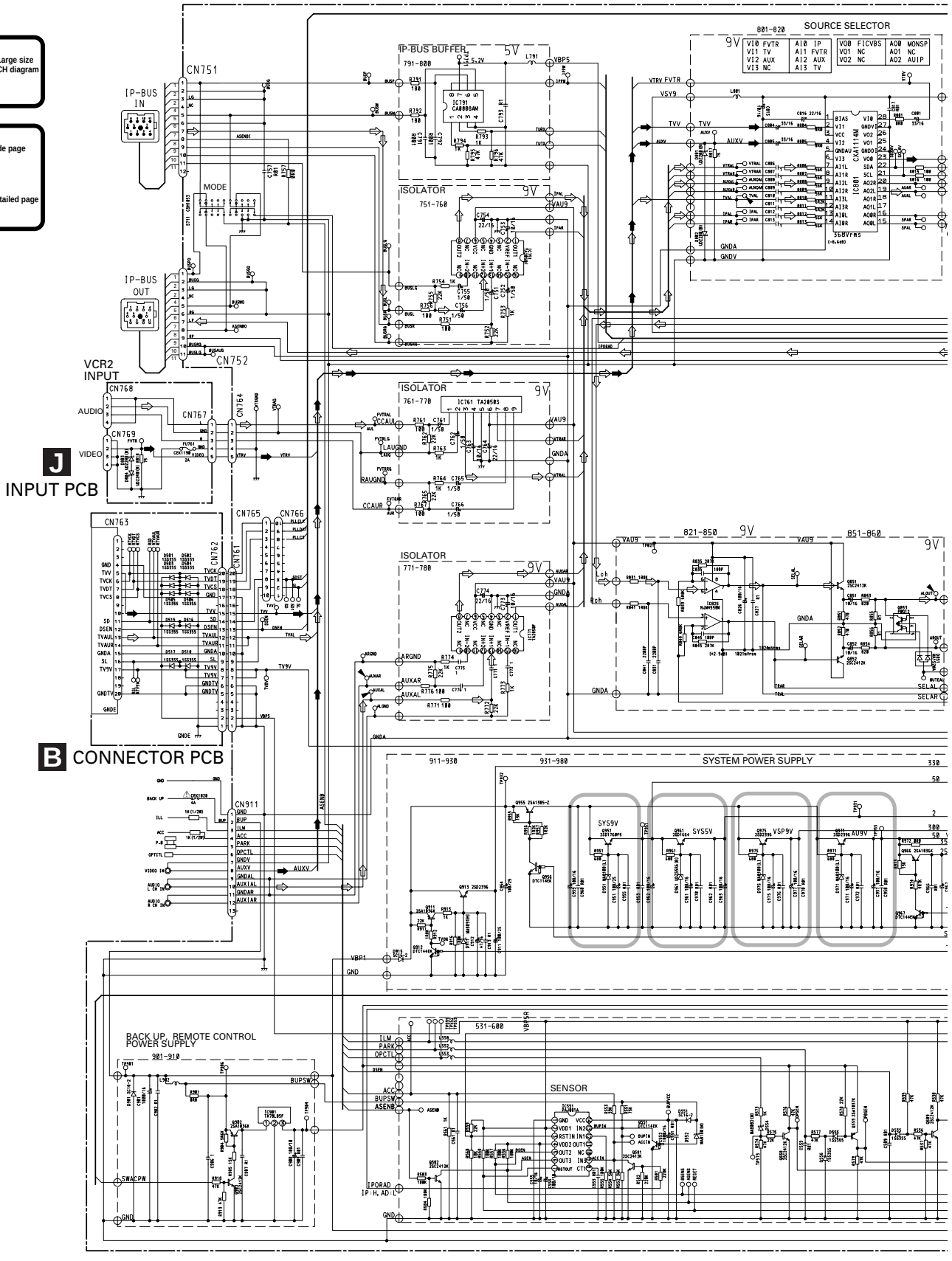

C MONITOR PCB
IC1491 BA7602F
IC 1301 IR3Y26A1
IC 1421 NJM2235M
IC 1351 M62393FP
IC 1601 PD5582A
DC-DC CONVERTER
DC-AC INVERTER
LCD
LCD BACKLIGHT
D KEYBOARD PCB
F MOTOR DRIVE PCB
IC 1952 M54649L
G ANGLE SENSE PCB
H LIFT SENSE PCB
I ANGLE 0 PCB
K HIDEAWAY UNIT
TV FRONT END
IF/DETECTOR
REMOTE CONTROL SENSOR
MOTHER PCB

3.2 MOTHER PCB (MAIN SECTION), CONNECTOR PCB, INPUT PCB(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

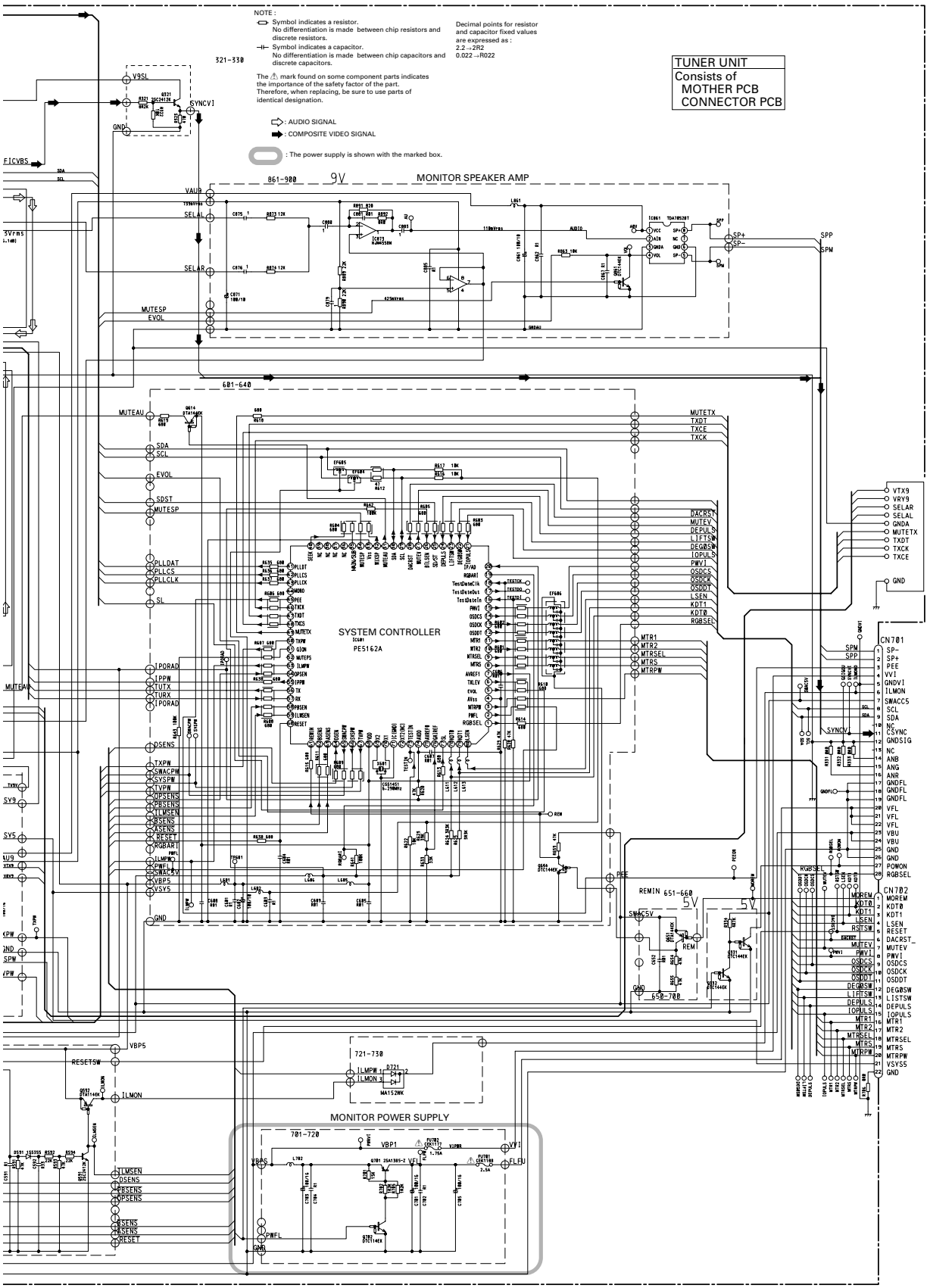
A-a 1/2

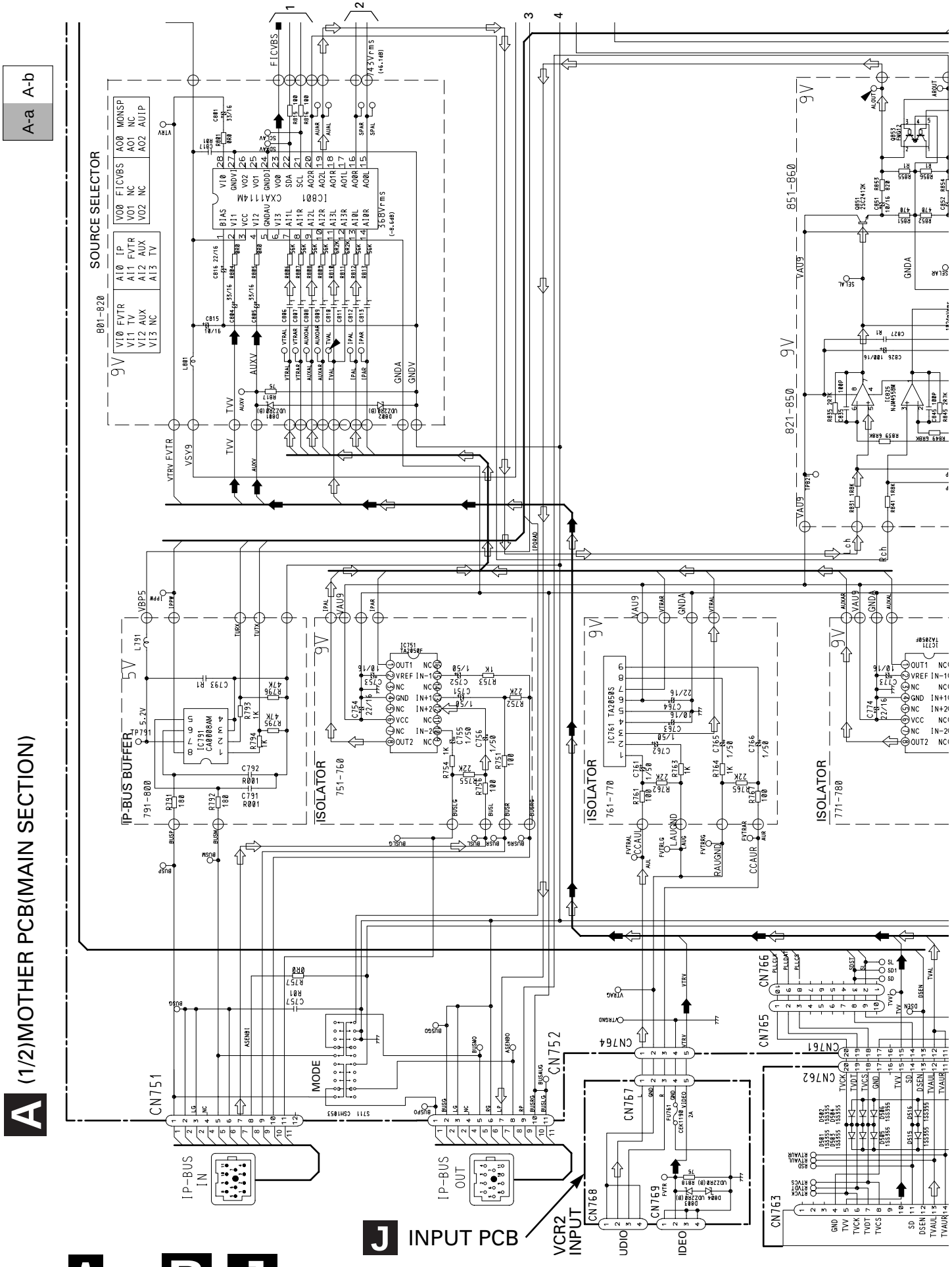


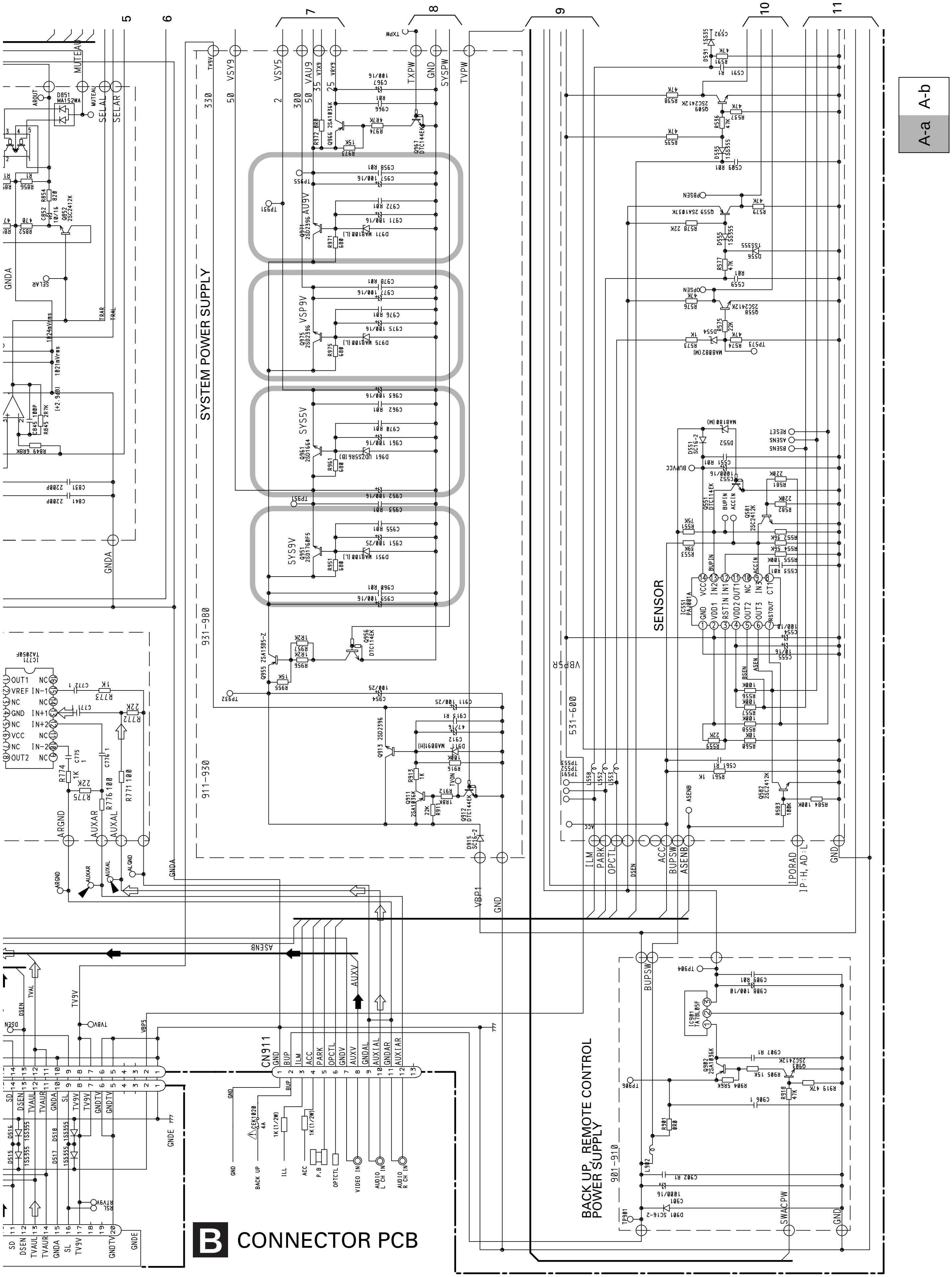


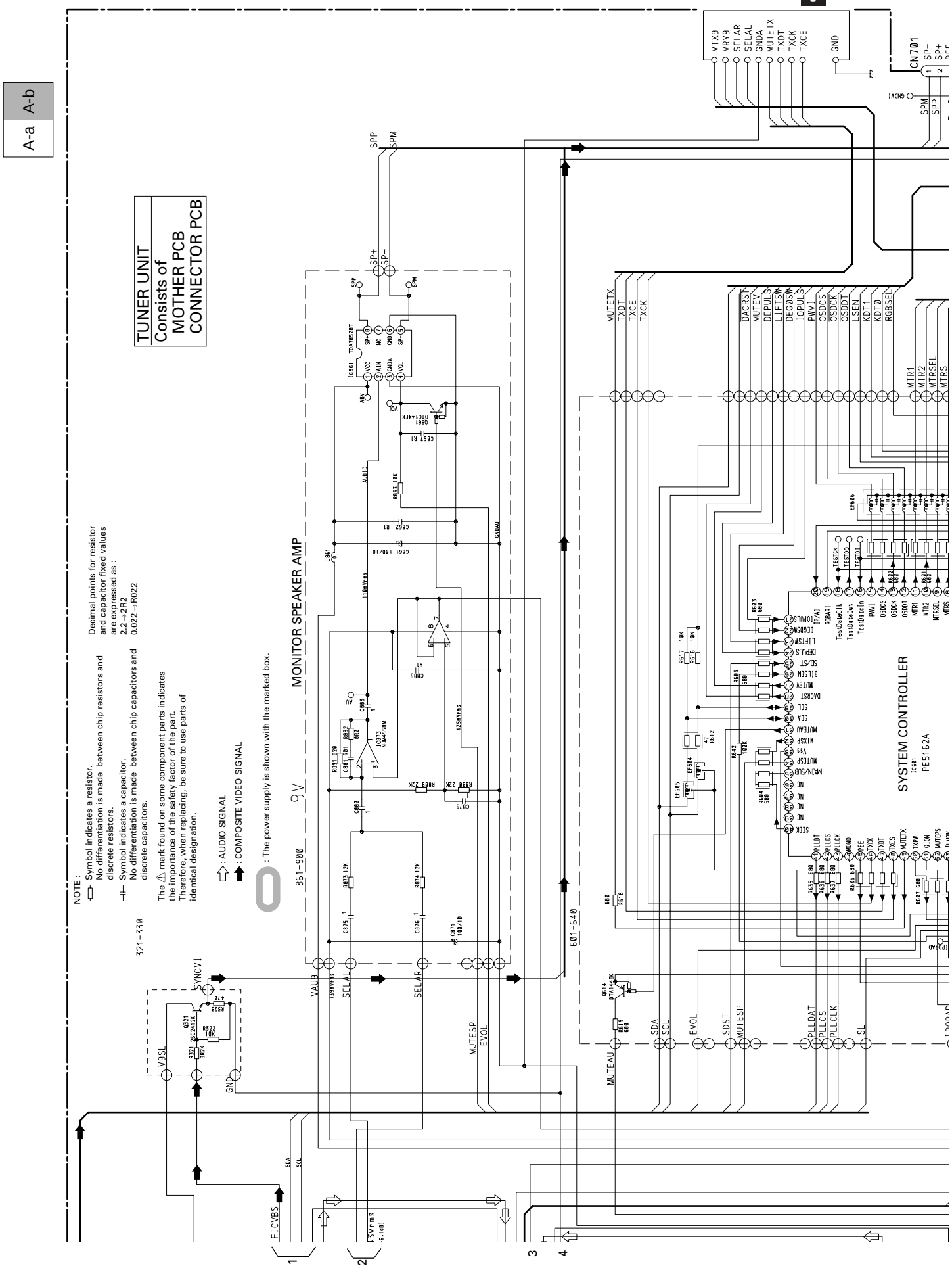
A-a 1/2

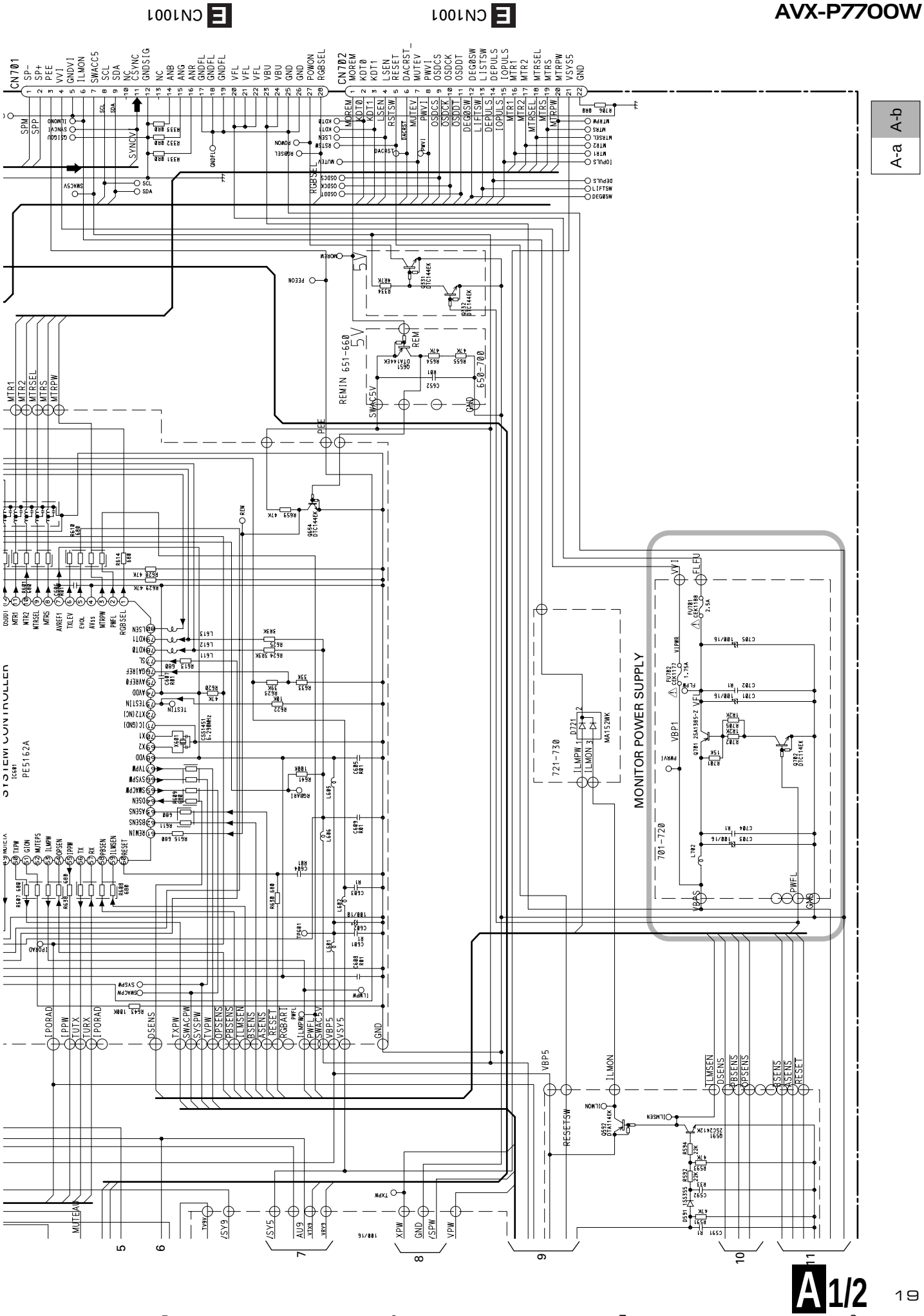
A (1/2)MOTHER PCB(MAIN SECTION)




A-a A-b
A (1/2)MOTHER PCB(MAIN SECTION)
SOURCE SELECTOR
IP-BUS BUFFER
ISOLATOR
ISOLATOR
ISOLATOR
MODE
IP-BUS IN
IP-BUS OUT
J INPUT PCB
VCR2 INPUT
CN751
CN752
CN763
CN764
CN765
CN766
CN767
CN768
CN769
A1/2 B J

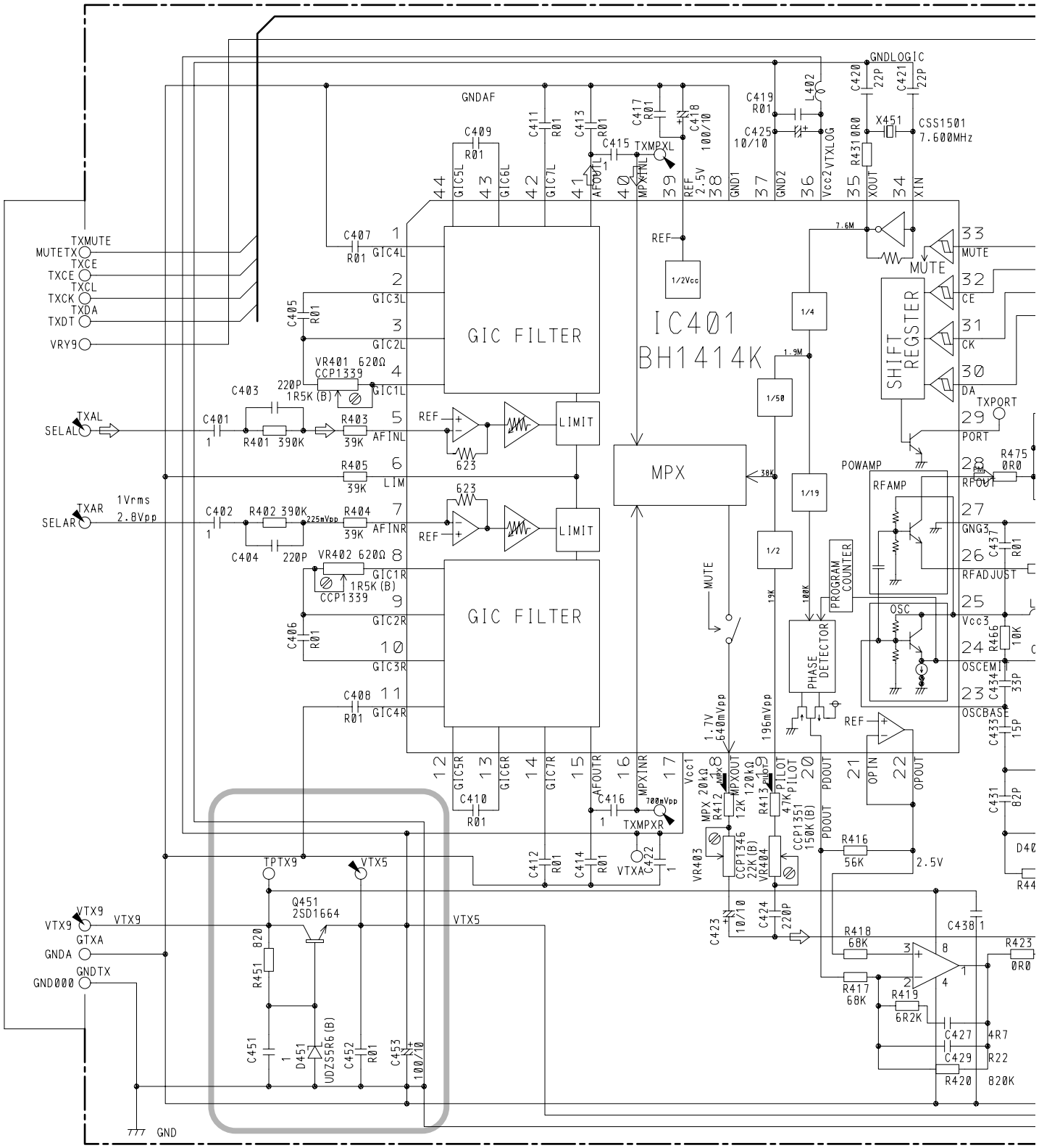

SYSTEM POWER SUPPLY
AU9V
VSP9V
SYS5V
SYS9V
SENSOR
BACK UP, REMOTE CONTROL POWER SUPPLY
B CONNECTOR PCB
CN911
931-980
911-930
531-600
901-910
A-a
A-b
A 1/2 B

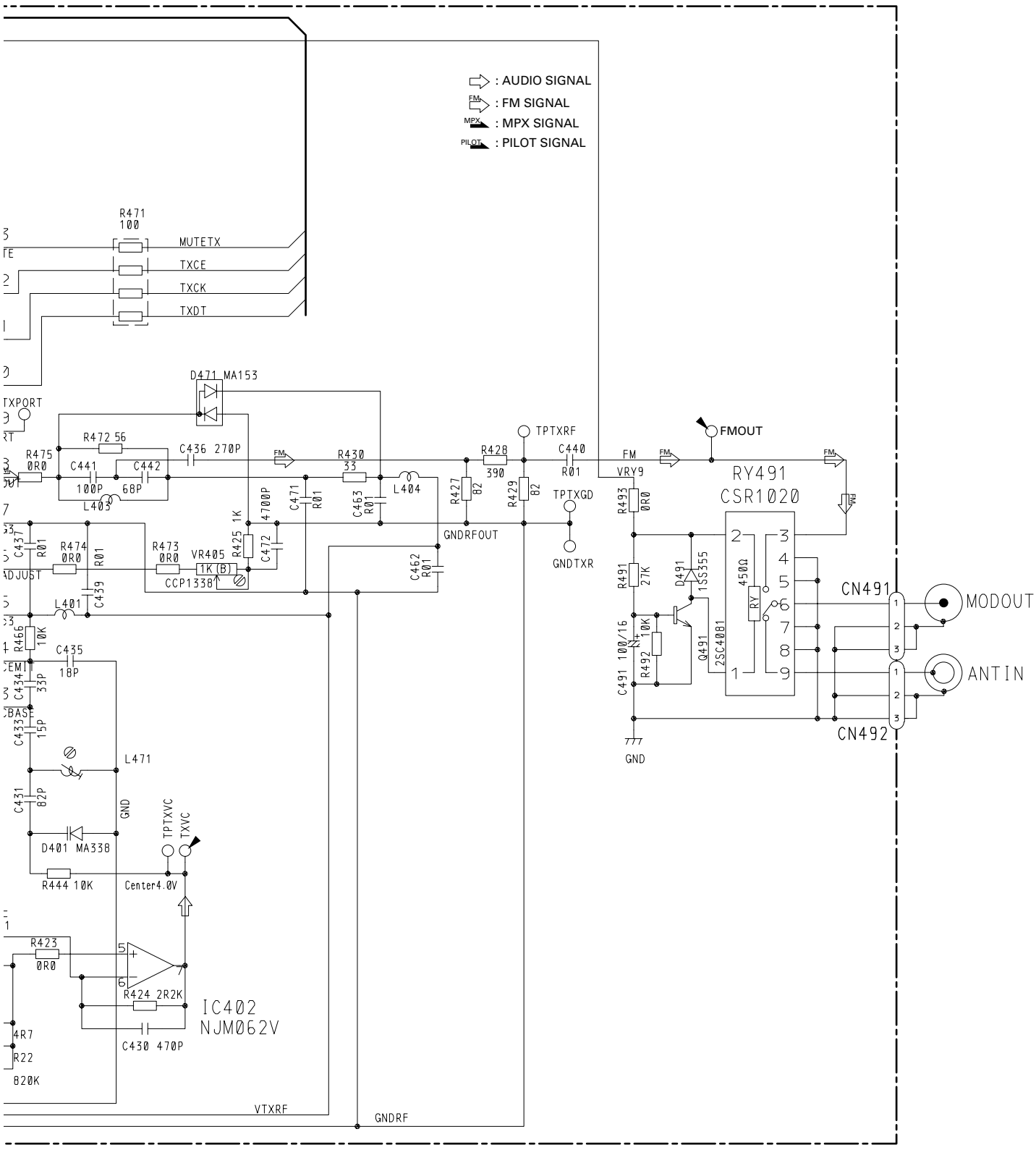

A (2/2)
A-a A-b
TUNER UNIT
Consists of
MOTHER PCB
CONNECTOR PCB
MONITOR SPEAKER AMP
SYSTEM CONTROLLER
PE5162A
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022
: AUDIO SIGNAL
: COMPOSITE VIDEO SIGNAL
: The power supply is shown with the marked box.
9V
861-900
321-330
601-640
CN701
SPP
SPM
SP+
SP-
VTX9
VRY9
SELAR
SELAL
GNDA
MUTETX
TXDT
TXCK
TXCE
GND
MUTETX
TXDT
TXCE
TXCK
DACRST
MUTEV
DEPULS
LIFTSW
DEGAUSW
IOPULS
PWV1
OSDCS
OSDCK
OSDDT
LSEN
KDT1
KDT0
RGBSEL
MTR1
MTR2
MTRSEL
MTRS
SDA
SCL
EVOL
SDST
MUTESP
PLLDAT
PLLCS
PLLCLK
SL
MUTEAU
VAUD
SELAL
SELAR
V9SL
GND
SYNCV1
FICVBS
3Vrms
SDA
SCL
1
2
3
4


CN1001
CN1001
CN701
CN702
SYSTEM CONTROLLER
PE5162A
MONITOR POWER SUPPLY
721-730
701-720
REMIN 651-660
650-700
A-a
A-b
A1/2

3.3 MOTHER PCB(TRANSMITTER SECTION)

A (2/2)MOTHER PCB(TRANSMITTER SECTION)

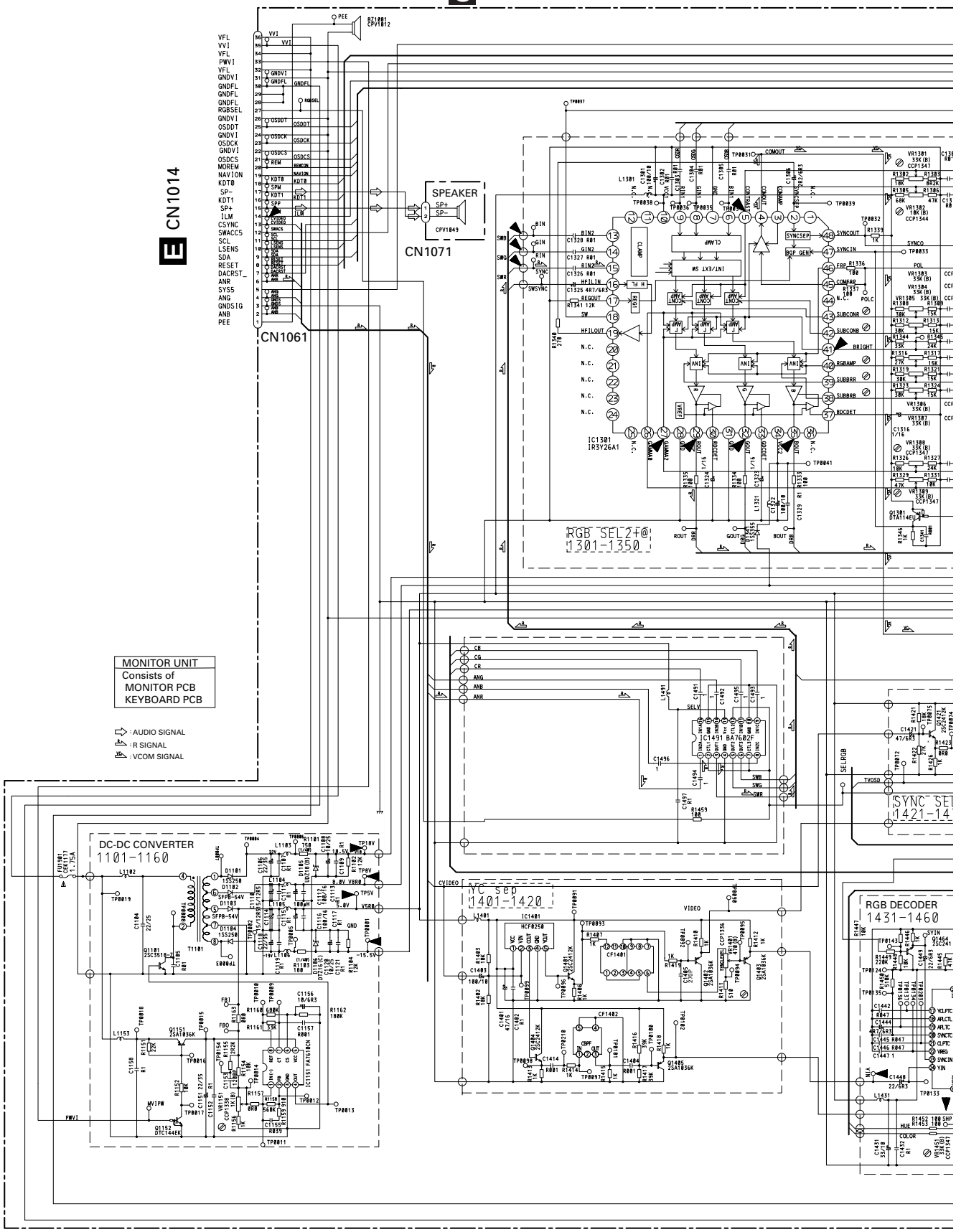



: AUDIO SIGNAL
: FM SIGNAL
: MPX SIGNAL
: PILOT SIGNAL
R471 100
MUTETX
TXCE
TXCK
TXDT
D471 MA153
TXPORT
R472 56
R475 0R0
C436 270P
C441 100P
C442 68P
L403
R430 33
L404
R428 390
C440 R01
TPTXRF
FMOUT
FM
VRY9
RY491 CSR1020
R493 0R0
R427 82
R429 82
TPTXGD
GNDTXR
GNDRFOUT
C471 R01
C463 R01
R425 1K
C472 4700P
R473 0R0
VR405 1K(B)
CCP1338
R474 0R0
C437 R01
C439
L401
C462 R01
R466 10K
C435 18P
C434 33P
C433 15P
L471
C431 82P
GND
D401 MA338
TPTXVC
TXVC
R444 10K
Center4.0V
R423 0R0
R424 2R2K
IC402 NJM062V
C430 470P
4R7
R22
820K
VTXRF
GNDRF
R491 27K
D491 1SS355
C491 100/16
R492 10K
Q491 2SC4081
450Ω
RY
CN491
MODOUT
ANTIN
CN492
GND

C-a

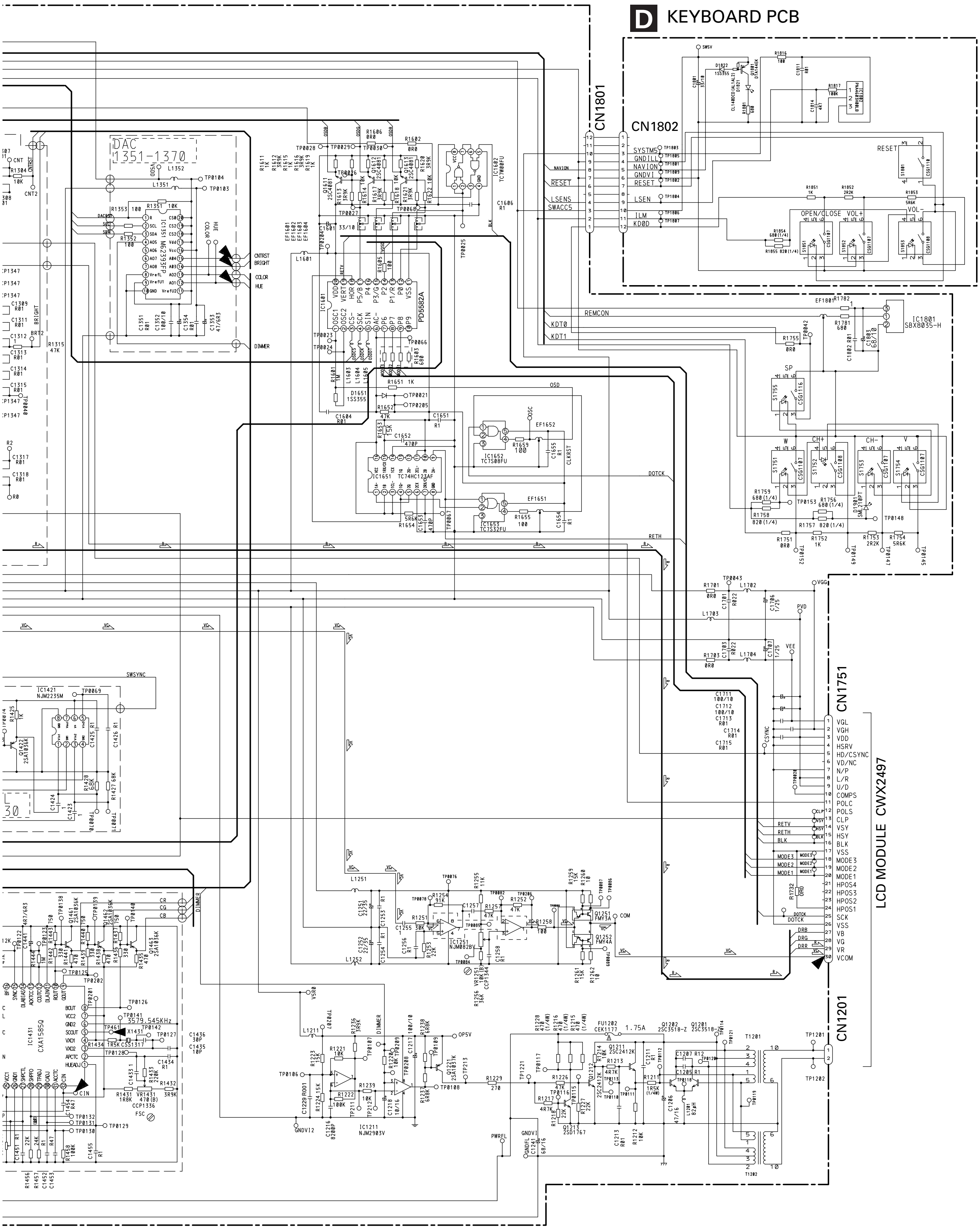
3.4 MONITOR UNIT(GUIDE PAGE)

C MONITOR PCB

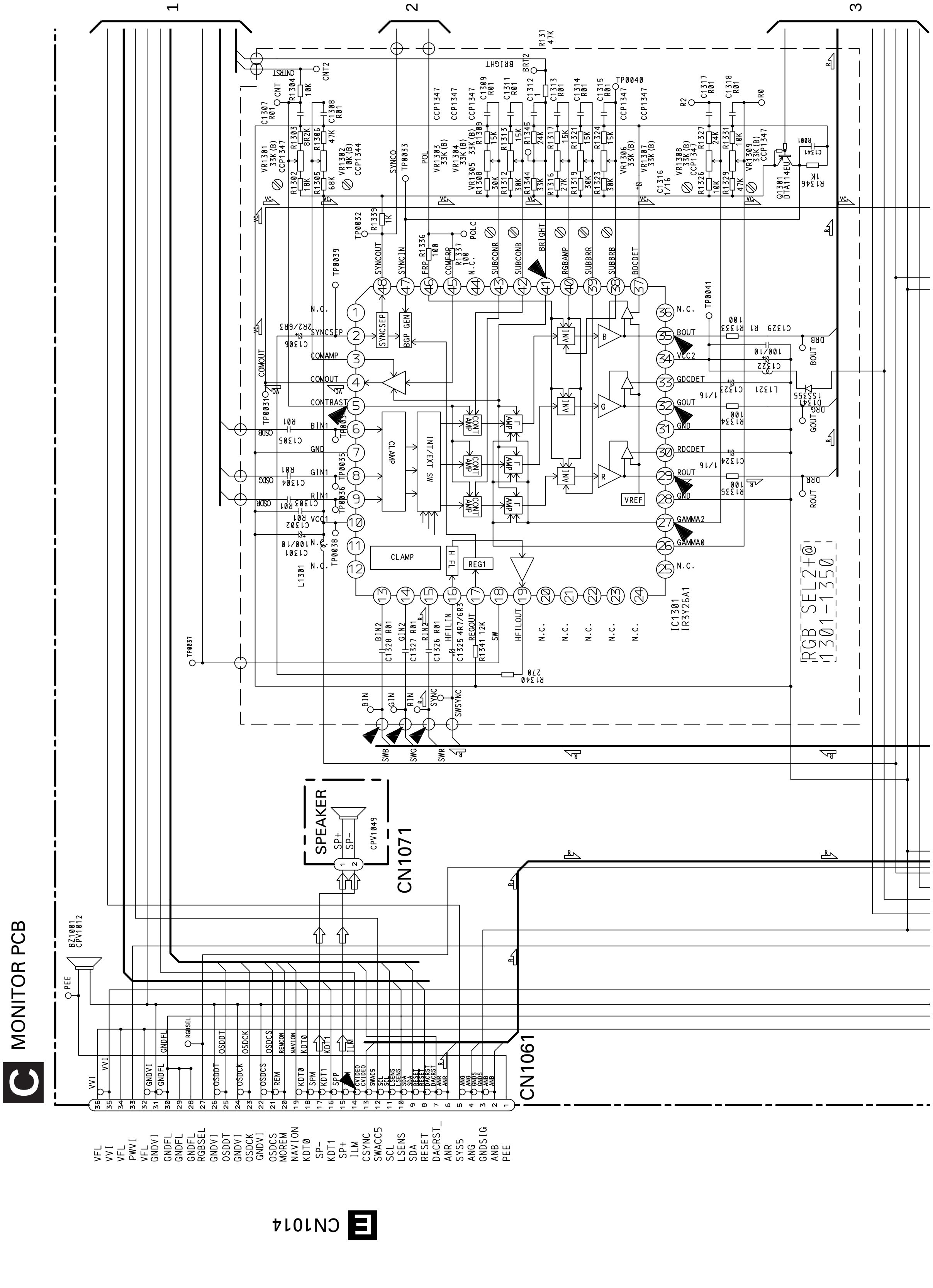


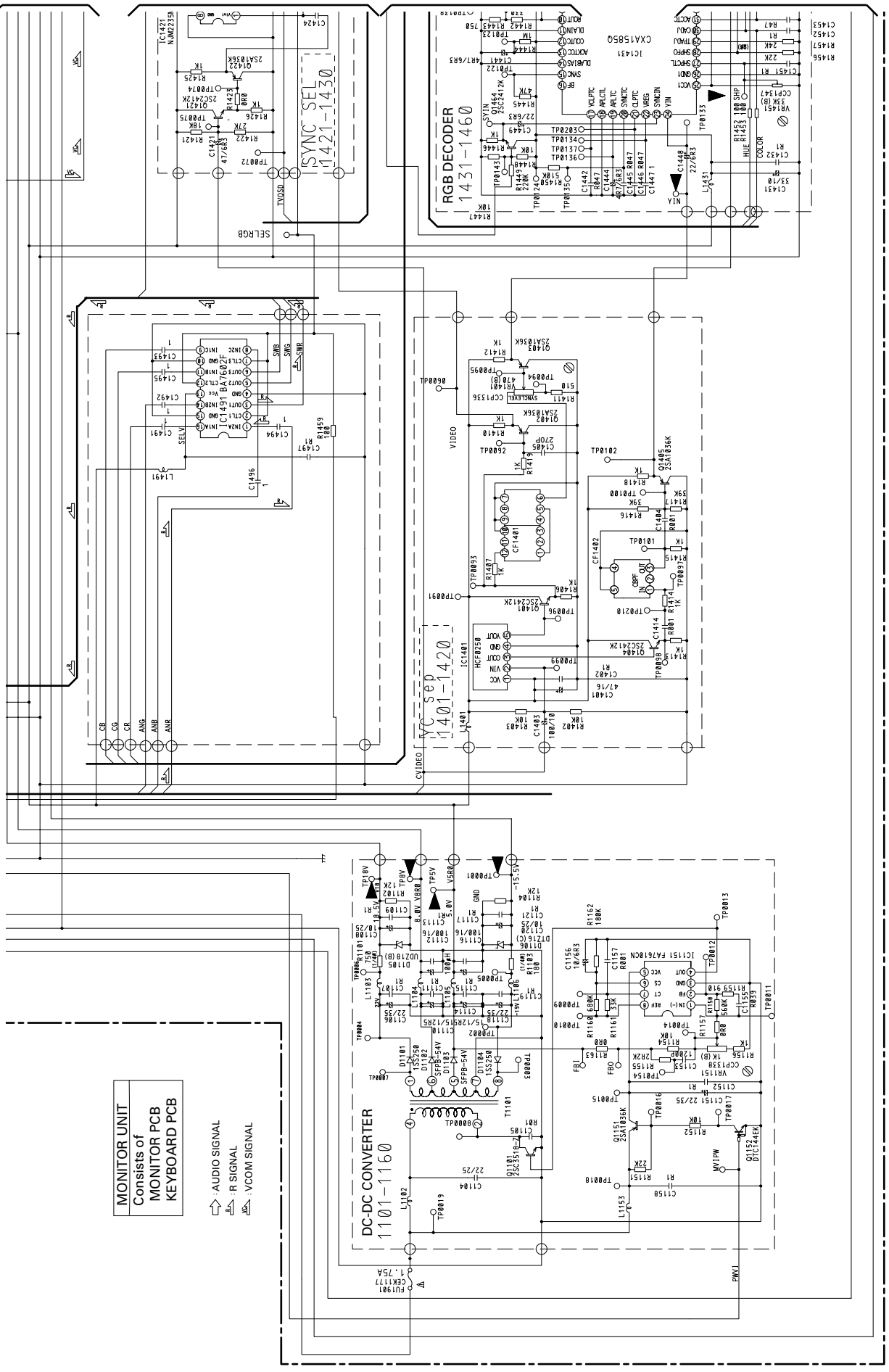
C

C-b


D KEYBOARD PCB
CN1801
CN1802
SYSTMS
GNDILL
NAVION
GNDV1
RESET
LSEN
ILM
KDØD
RESET
OPEN/CLOSE VOL+
VOL-
IC1801
SBX8035-H
REMCON
KDTØ
KDT1
SP
W
CH+
CH-
V
DAC
1351-1370
PD5582A
IC1651
TC74HC123AF
IC1652
TC7S08FU
IC1653
TC7S32FU
IC1421
NJM2235M
SWSYNC
IC1251
NJM082BV
IC1211
NJM2903V
IC1431
CXA1585Q
3579.545KHz
CN1751
LCD MODULE CWX2497
VGL
VGH
VDD
HSRV
HD/CSYNC
VD/NC
N/P
L/R
U/D
COMPS
POLC
POLS
CLP
VSY
HSY
BLK
VSS
MODE3
MODE2
MODE1
HPOS4
HPOS3
HPOS2
HPOS1
SCK
VSS
VB
VG
VR
VCOM
CN1201
FU1202
CEK1177
1.75A
T1201
T1202
CNTRST
BRIGHT
COLOR
HUE
DIMMER

C-a C-b

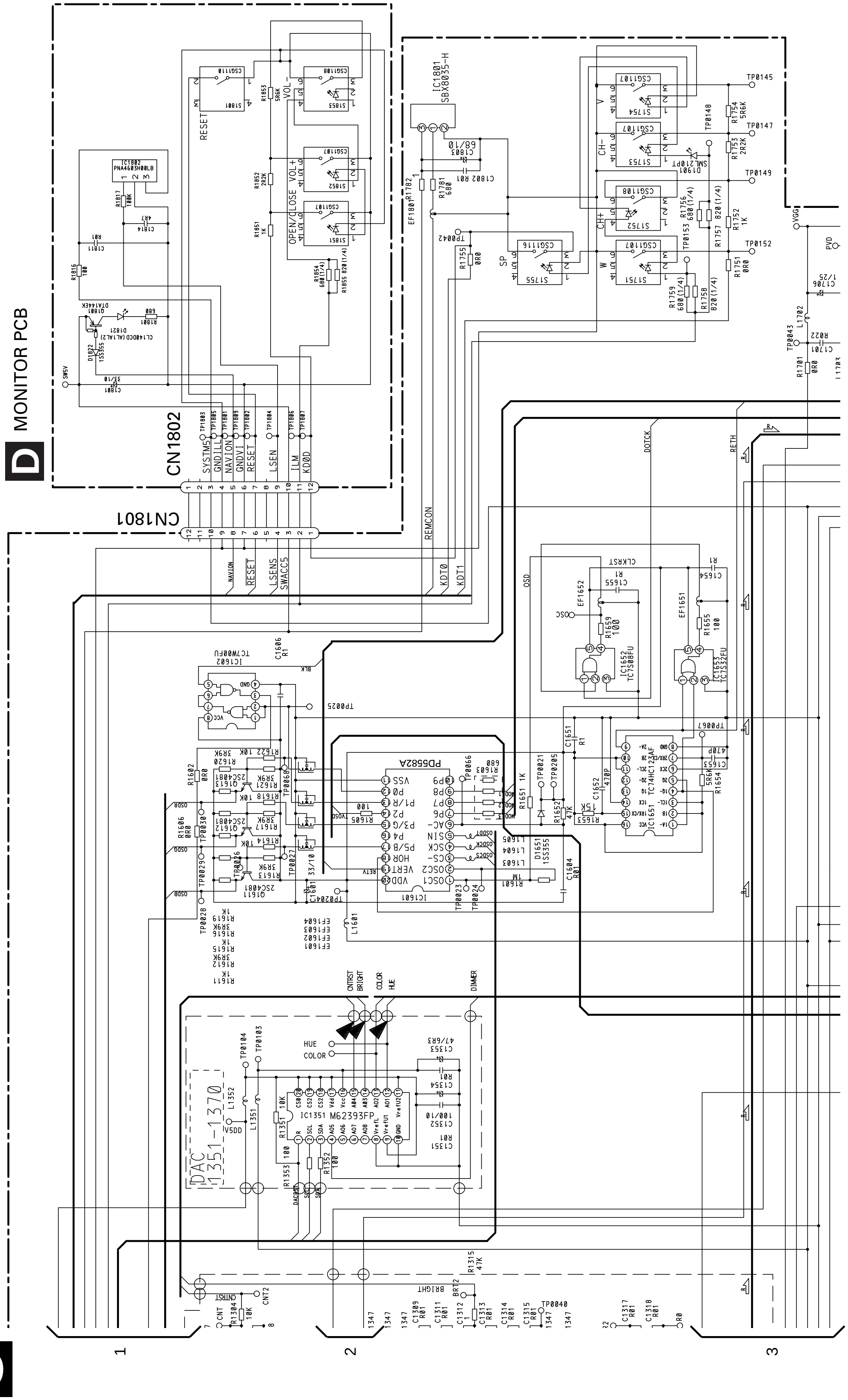

C
MONITOR PCB
SPEAKER
CN1071
CN1061
E CN1014
IC1301
IR3Y26A1


SYNC SEL
1421-1430
RGB DECODER
1431-1460
SYNC sep
1401-1420
DC-DC CONVERTER
1101-1160
MONITOR UNIT
Consists of
MONITOR PCB
KEYBOARD PCB
: AUDIO SIGNAL
: R SIGNAL
: VCOM SIGNAL

1 2 3 4

A

C-b
C-a



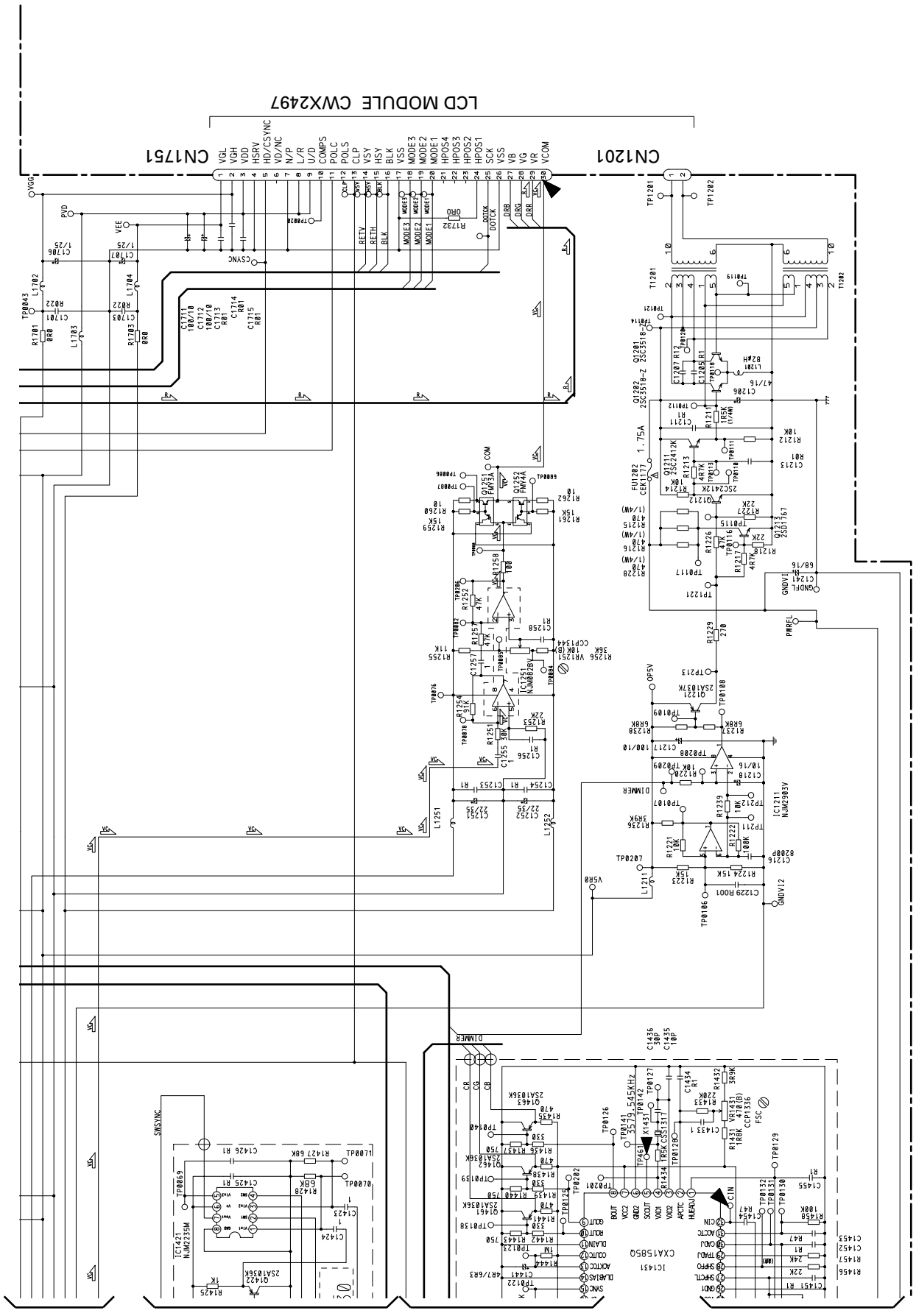
B

C

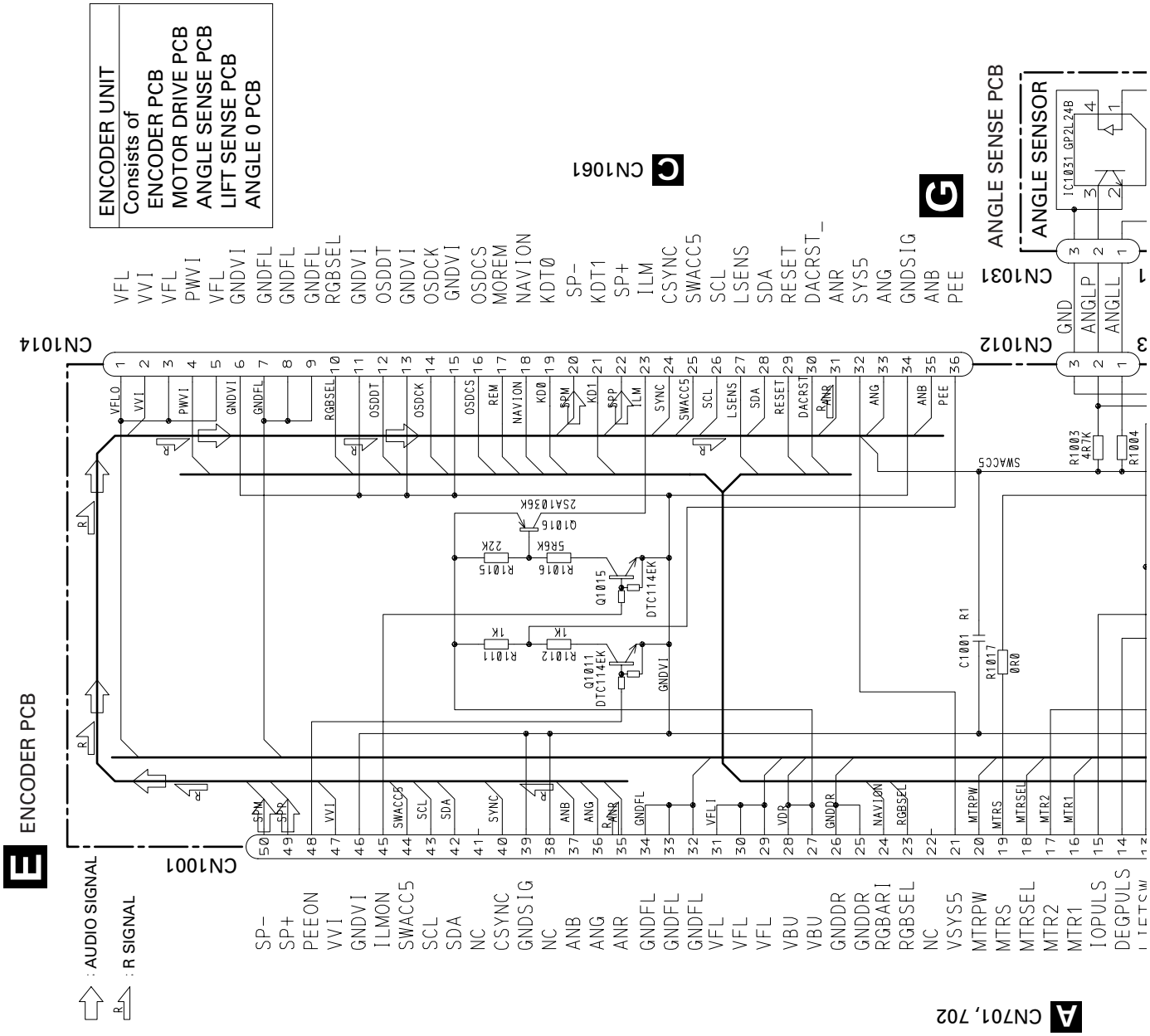
D

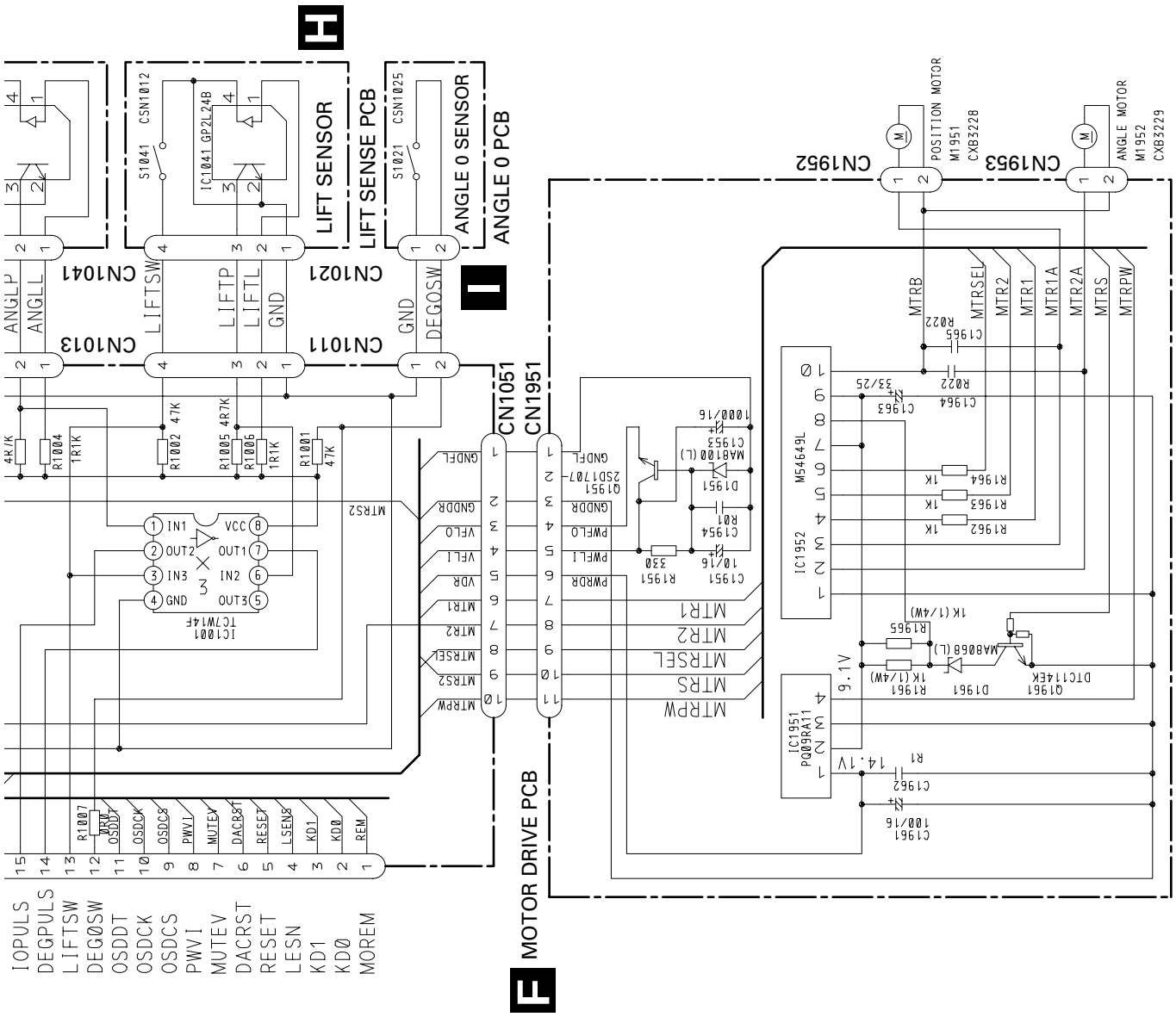
1 2 3

1 2 3 4


LCD MODULE CWX2497
CN1751
CN1201
IC1431
CXA1585Q

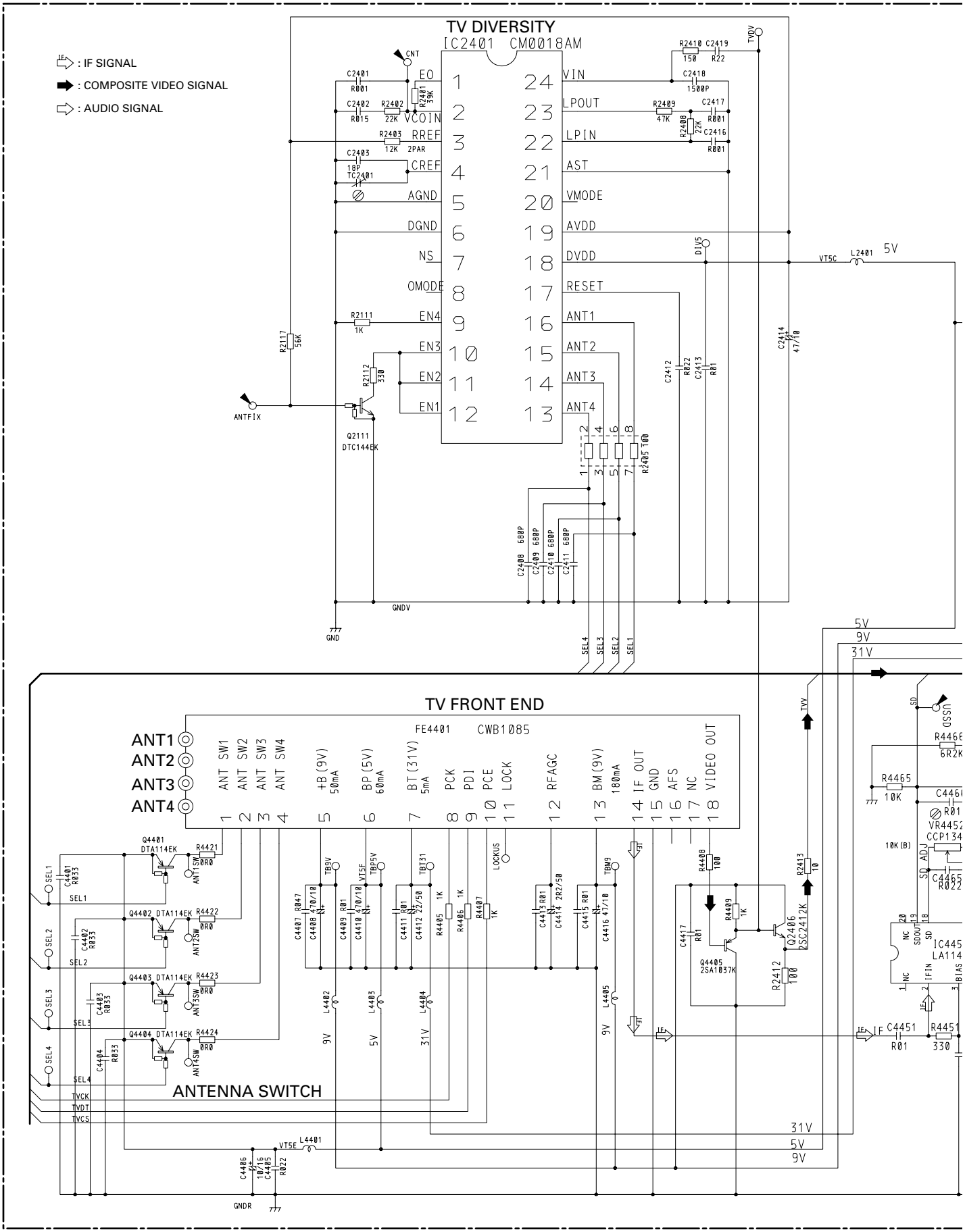
3.5 ENCODER UNIT

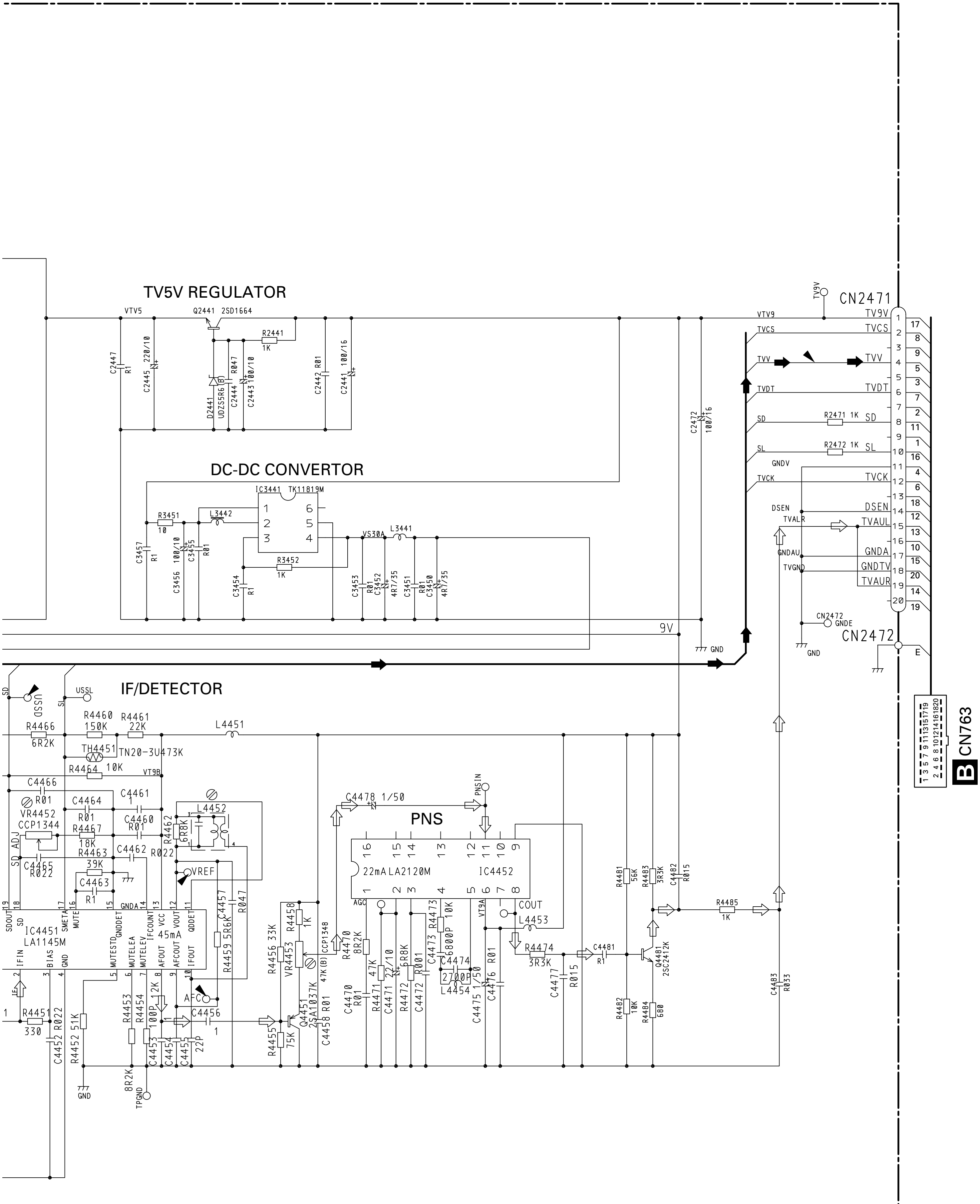



H
LIFT SENSOR
LIFT SENSE PCB
ANGLE 0 SENSOR
ANGLE 0 PCB
I
CN1041
CN1021
CN1013
CN1011
CN1051
CN1951
CN1952
CN1953
POSITION MOTOR
M1951
CXB3228
ANGLE MOTOR
M1952
CXB3229
MOTOR DRIVE PCB
F
IOPULS
DEGPULS
LIFTSW
DEGØSW
OSDDT
OSDCK
OSDCS
PWVI
MUTEV
DACRST
RESET
LESN
KD1
KD0
MOREM

3.6 HIDEAWAY UNIT

HIDEAWAY UNIT



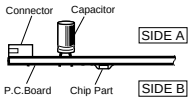

TV5V REGULATOR
Q2441 2SD1664
D2441 UDZS5R6(B)
DC-DC CONVERTOR
IC3441 TK11819M
IF/DETECTOR
IC4451 LA1145M
PNS
22mA LA2120M IC4452
Q4451 2SA1037K
Q4481 2SC2412K
CN2471
CN2472
B CN763
9V
GND

4. PCB CONNECTION DIAGRAM

4.1 MOTHER PCB

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



IC, Q

IC551

Q975 Q971
Q913 Q956

IC901

IC791

IC801 IC601
IC861
IC873

IC761

VR402
VR401

VR403
VR404

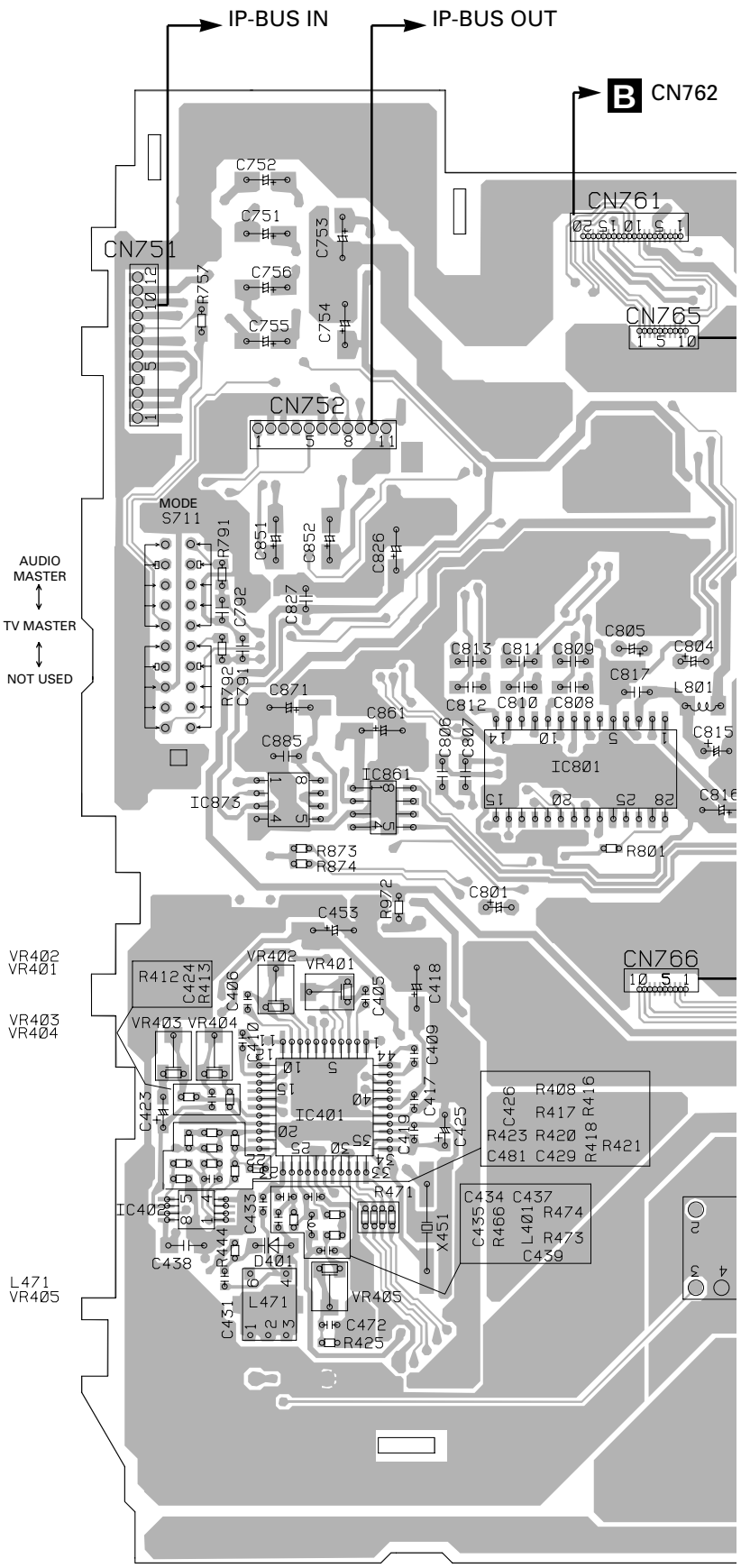
IC401 Q654

IC402

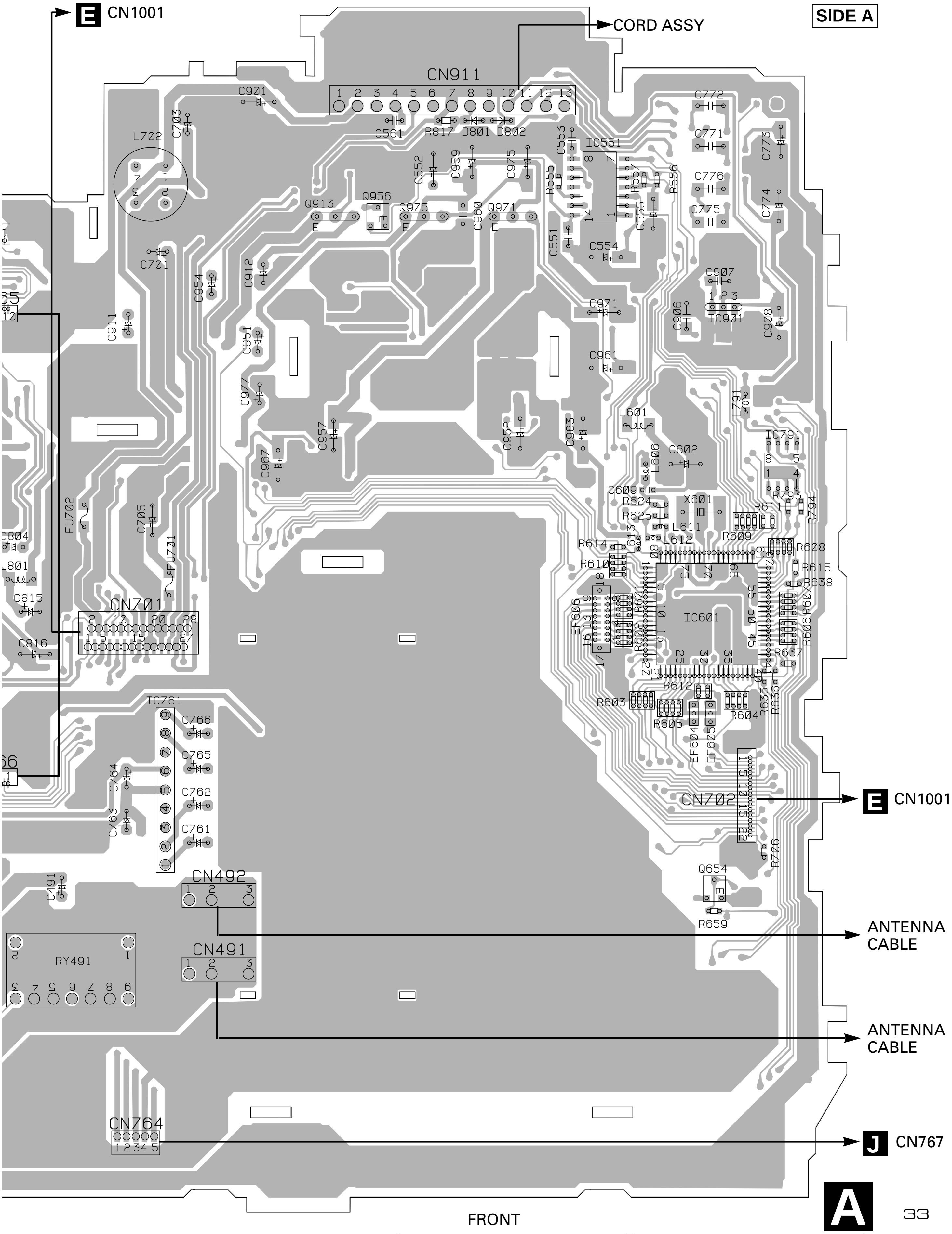
L471
VR405

ADJ

A MOTHER PCB



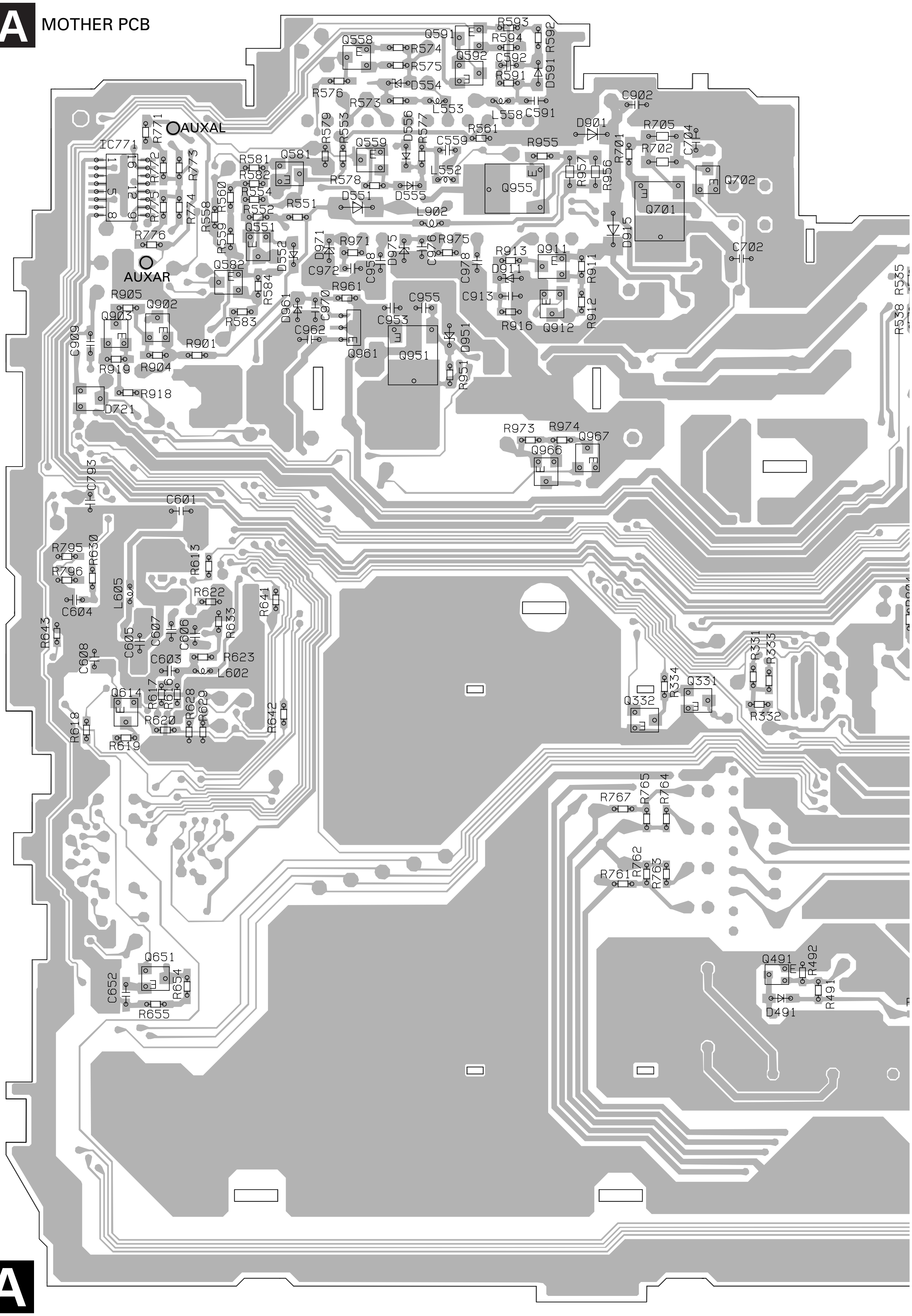
A



SIDE A
E CN1001
CORD ASSY
CN911
1 2 3 4 5 6 7 8 9 10 11 12 13
C901
C561
R817
D801
D802
L702
C703
C701
C553
IC551
C552
C959
C975
R555
R557
R556
C555
C772
C771
C776
C775
C773
C774
Q913
Q956
Q975
Q971
C960
C551
C554
C907
IC901
C906
C908
C954
C912
C911
C951
C971
C961
C977
C957
C952
C963
C967
L601
L791
IC791
L606
C602
C609
R624
R625
X601
R611
R794
L611
L612
R609
R608
R614
L613
R610
R615
R638
EF606
R601
R602
IC601
R607
R606
R637
R612
R603
R605
R604
R635
R636
EF604
EF605
CN702
E CN1001
R706
Q654
R659
FU702
C705
FU701
C804
L801
C815
C816
CN701
IC761
C766
C765
C764
C762
C763
C761
C491
CN492
CN491
RY491
ANTENNA CABLE
ANTENNA CABLE
CN764
J CN767
FRONT

A

A MOTHER PCB



AUXAL
AUXAR
IC771
R771
R772
R773
R774
R775
R776
Q558
R574
R575
Q591
Q592
R593
R594
R592
C592
R591
D591
D554
R576
R573
L553
L558
C591
C902
D901
R705
R702
C704
R579
R553
D556
R577
R561
C559
R955
R701
Q559
R581
R582
Q581
R578
L552
D555
R957
R956
Q955
Q702
Q701
R554
R552
R551
D551
L902
D915
R560
R558
R559
Q551
D552
D971
R971
C958
D975
C976
R975
C978
R913
Q911
R911
C702
R535
Q582
R584
C972
D911
C913
R961
D961
C970
C955
C953
Q912
R912
R916
R538
R583
R905
Q902
Q903
C909
C962
Q961
Q951
D951
R901
R919
R904
R951
R918
D721
R973
R974
Q966
Q967
C703
C601
R795
R630
R796
C604
L605
R613
R622
R641
R633
R643
C605
C607
C606
C603
R623
C608
L602
Q614
R617
R616
R628
R629
R620
R642
R618
R619
R334
Q331
R331
R333
Q332
R332
R767
R765
R764
R761
R762
R763
Q651
C652
R654
R655
Q491
R492
D491
R491

SIDE B

IC, Q

Q591
Q558
Q592

IC771
Q581 Q559

Q702
Q955
Q701
Q551
Q911
Q582
IC751

Q902
Q903 Q912
Q509
Q961 Q951

Q853

Q967
Q966
Q852 Q851

IC825

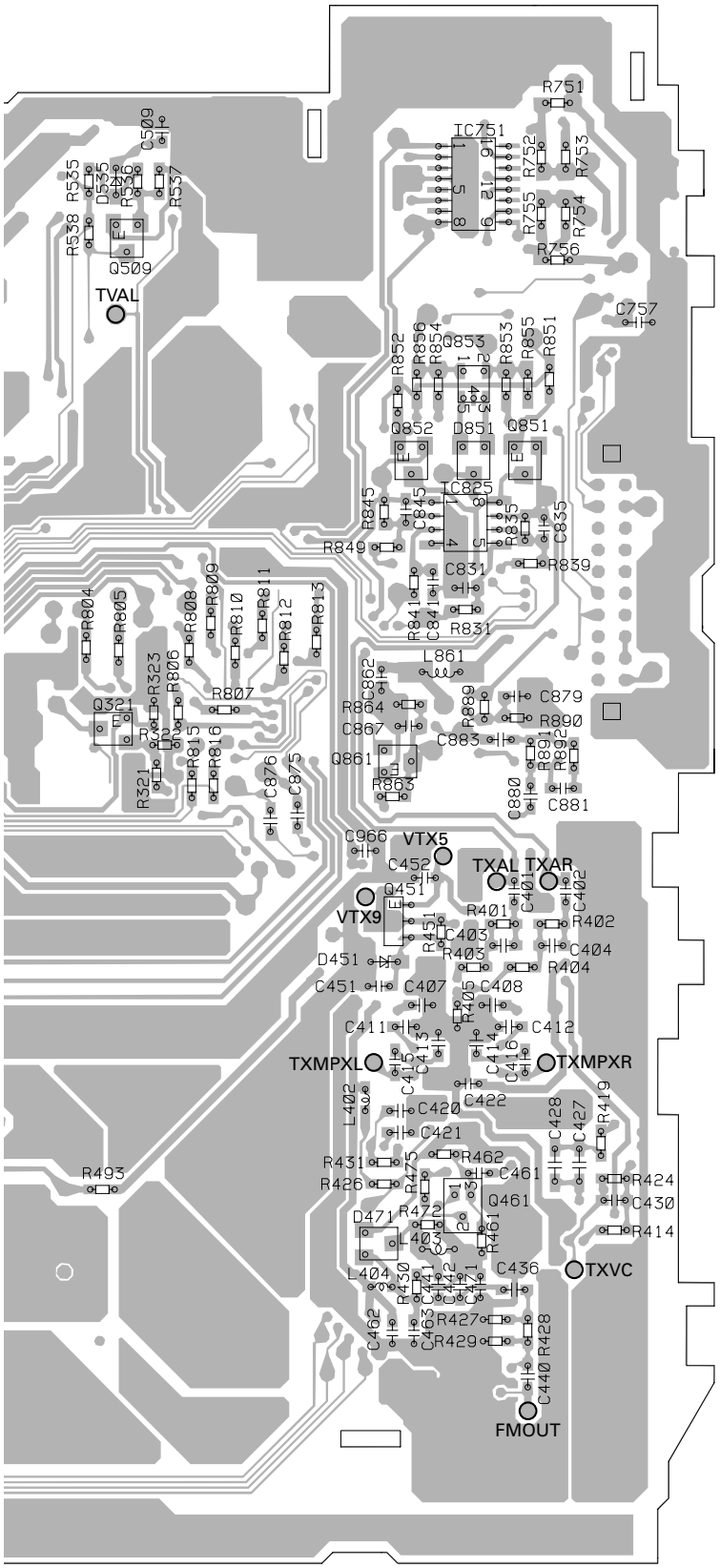
Q321

Q614 Q331
Q332 Q861

Q451

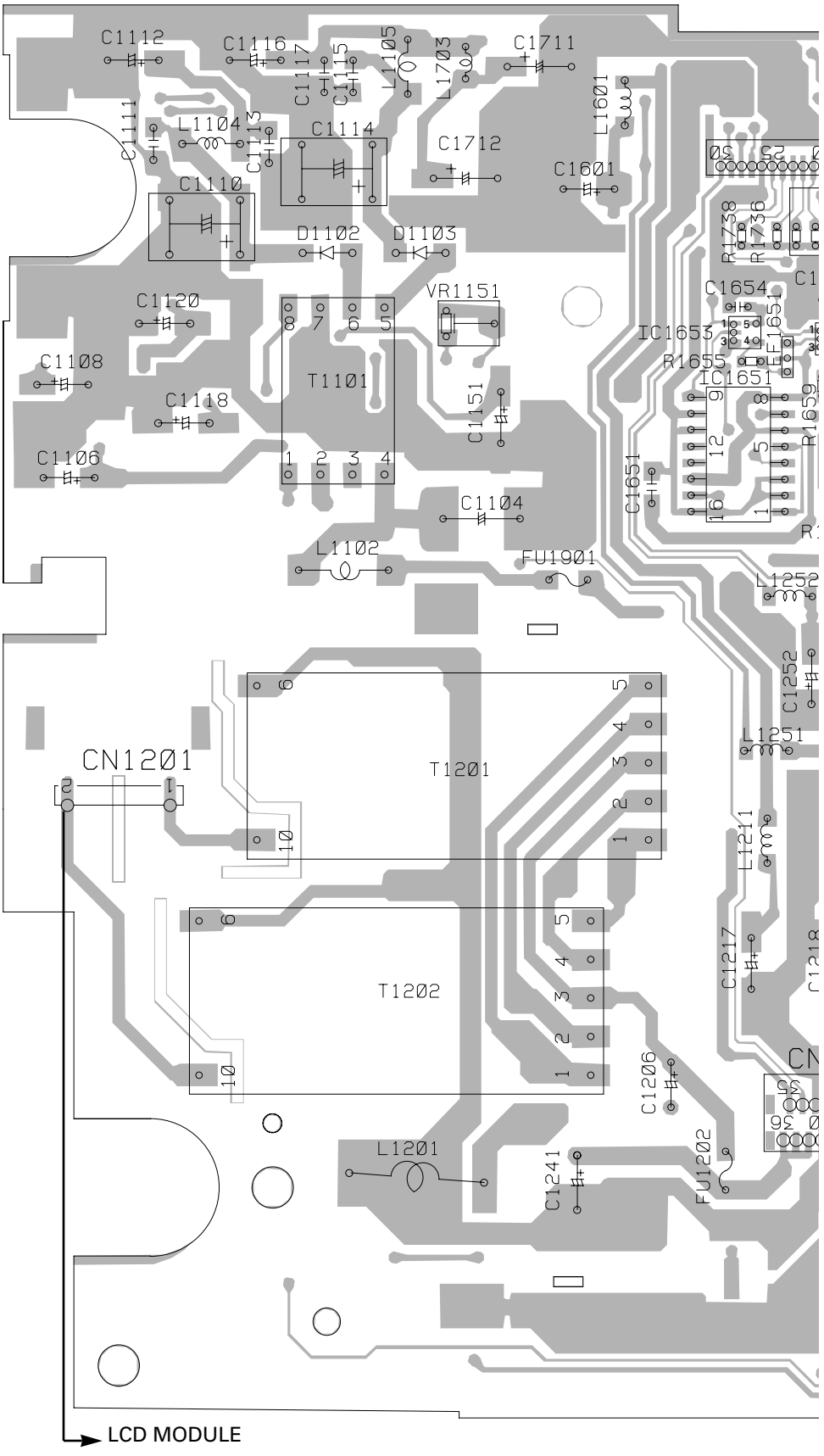
Q651 Q491

Q461

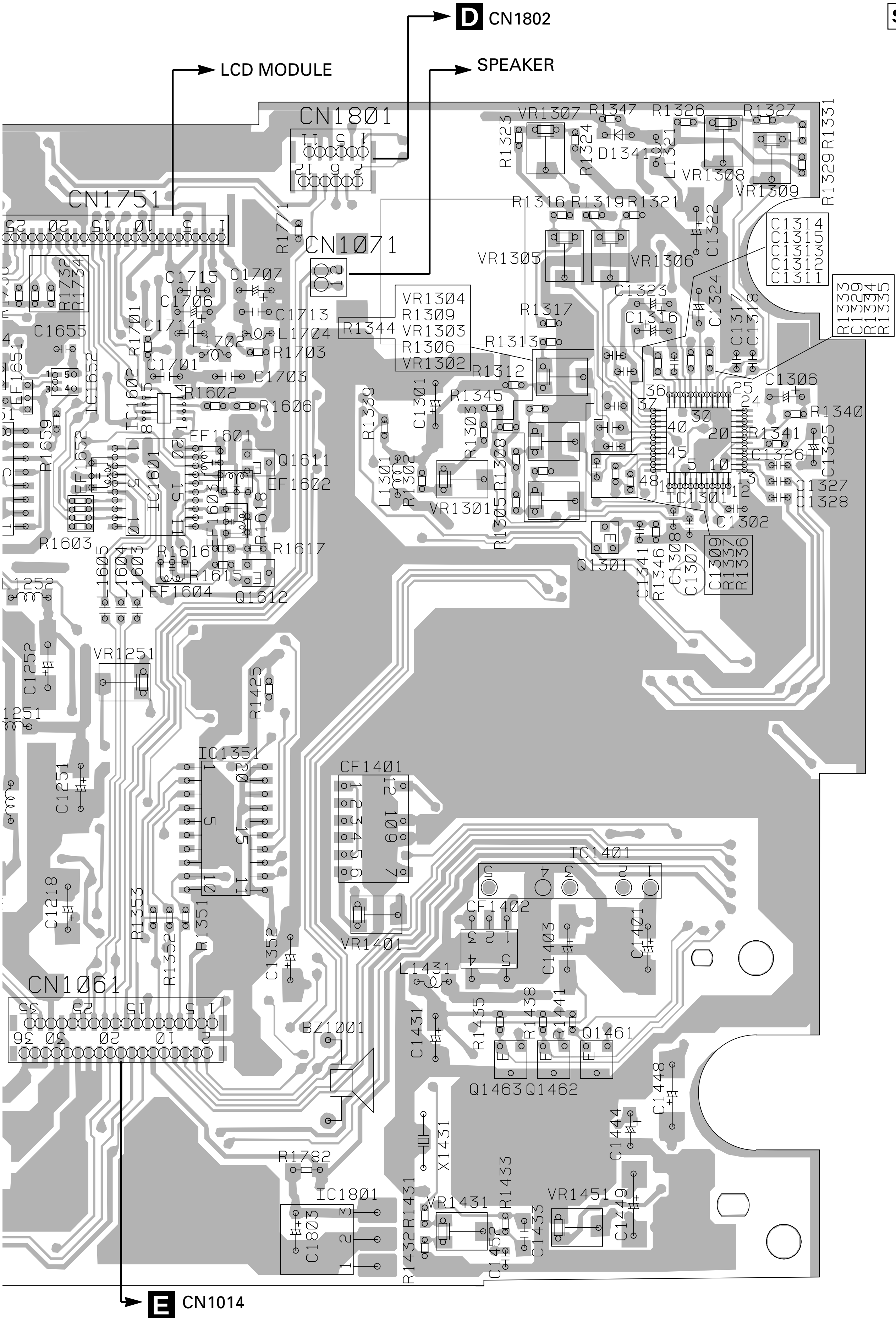


4.2 MONITOR PCB

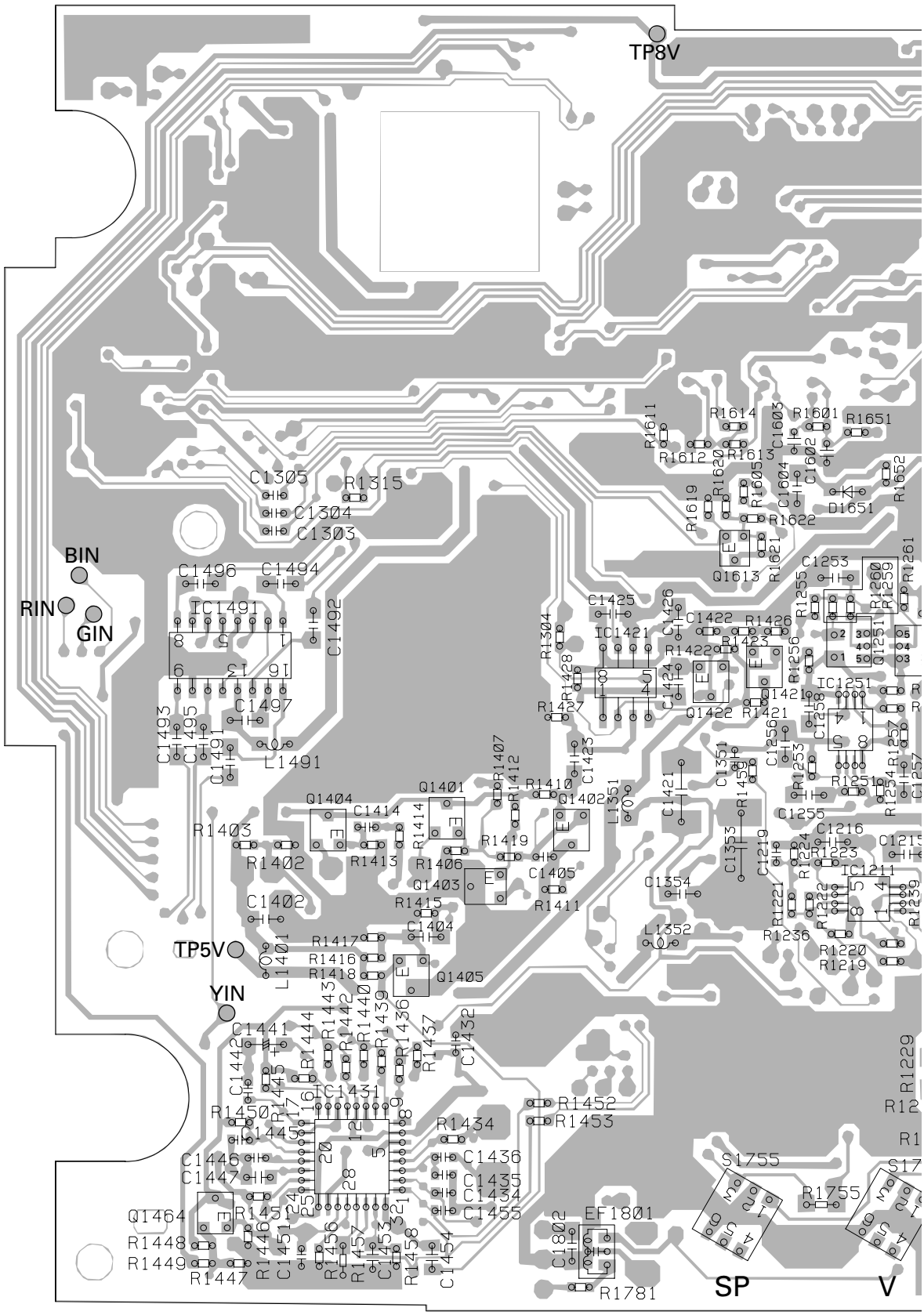
C MONITOR PCB



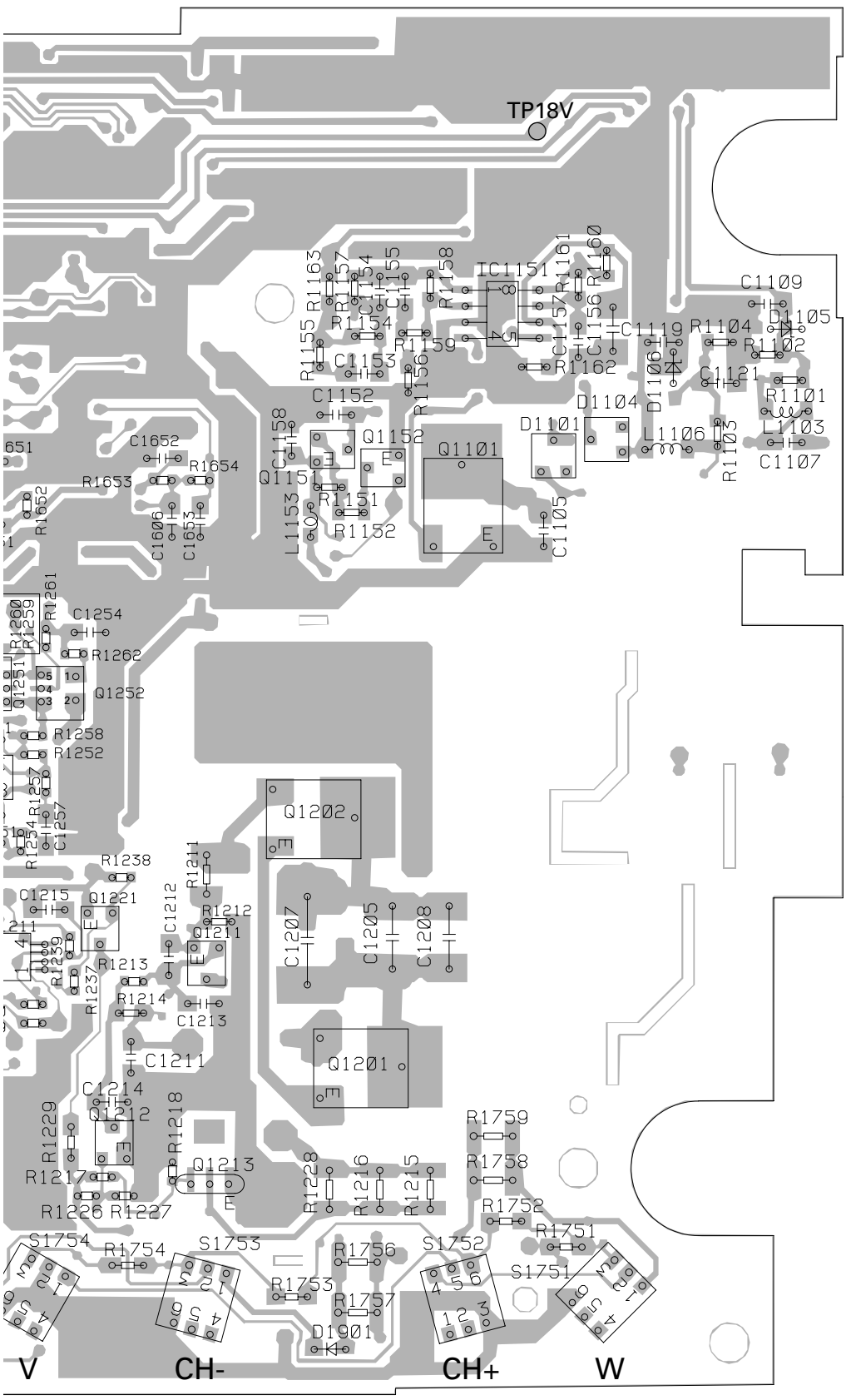
SIDE A


D CN1802
LCD MODULE
SPEAKER
CN1801
CN1751
CN1071
CN1061
E CN1014
IC1301
IC1351
IC1401
IC1601
IC1801
CF1401
CF1402
BZ1001
X1431
VR1301
VR1302
VR1303
VR1304
VR1305
VR1306
VR1307
VR1308
VR1309
VR1251
VR1401
VR1431
VR1451
Q1301
Q1461
Q1462
Q1463
Q1611
Q1612
EF1601
EF1602
EF1603
EF1604
EF1651
EF1652
D1341
R1344
R1309
R1306
C1314
C1315
C1313
C1312
C1311
R1333
C1329
R1334
R1335
C1309
R1337
R1336

C MONITOR PCB



SIDE B

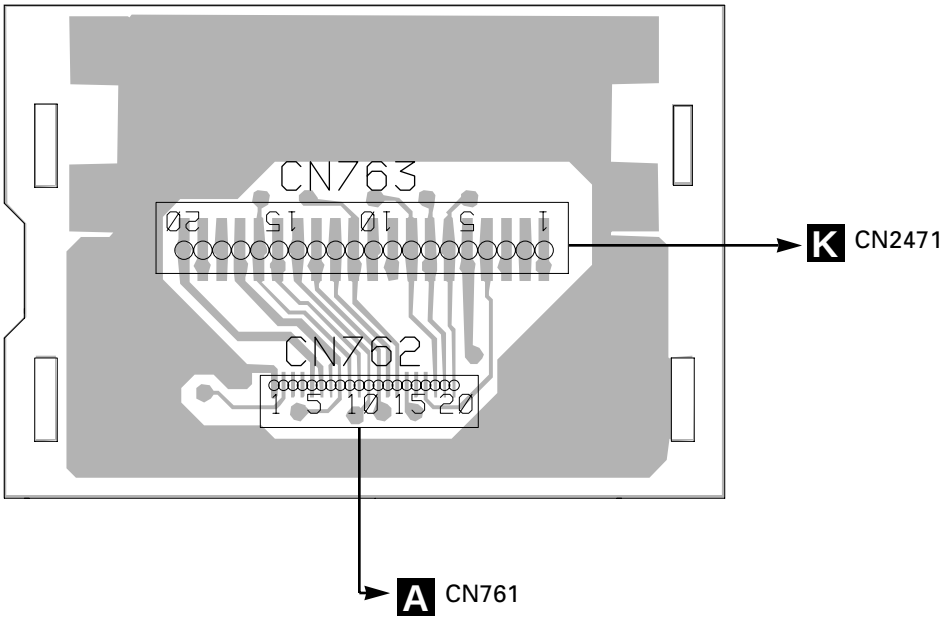

TP18V
IC1151
C1109
D1105
R1104
R1102
C1121
R1101
L1103
C1107
R1103
L1106
D1104
D1101
D1106
C1119
R1162
C1157
C1156
R1161
R1160
R1163
R1157
R1154
C1155
R1158
R1155
C1153
R1159
R1156
C1152
C1158
Q1152
Q1151
Q1101
R1151
R1152
L1153
C1105
C1652
R1654
R1653
R1652
C1606
C1653
651
Q1613
IC1491
IC1421
Q1252
Q1251
Q1421
IC1251
Q1422
Q1202
Q1401
Q1404
Q1402
Q1221
Q1403
Q1211
IC1211
Q1405
Q1201
Q1212
IC1431
Q1213
Q1464
C1254
R1262
R1261
R1260
R1259
Q1252
R1258
R1252
R1257
C1257
R1254
R1238
R1211
C1215
Q1221
C1212
R1212
Q1211
R1213
R1239
R1237
R1214
C1213
C1211
C1214
Q1212
R1229
R1218
R1217
Q1213
R1226
R1227
R1228
R1216
R1215
R1759
R1758
R1752
R1751
S1754
R1754
S1753
R1756
R1753
R1757
D1901
S1752
S1751
Q1202
Q1201
C1207
C1205
C1208
V
CH-
CH+
W

A
B
C
D

4.3 CONNECTOR PCB

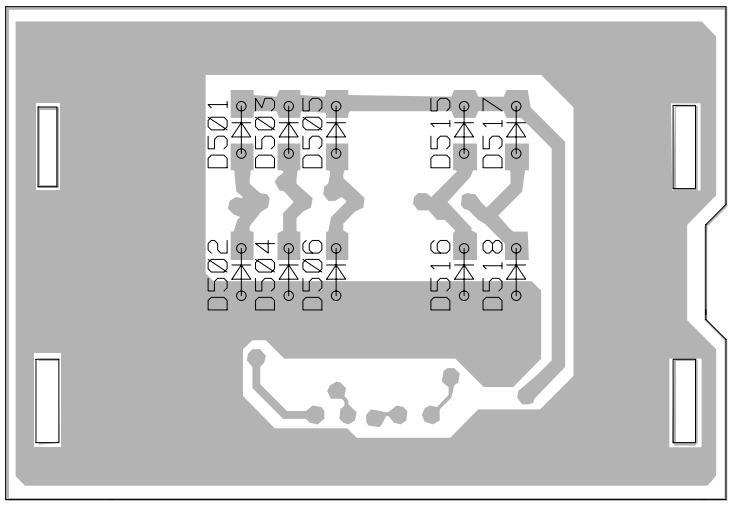
B CONNECTOR PCB

SIDE A

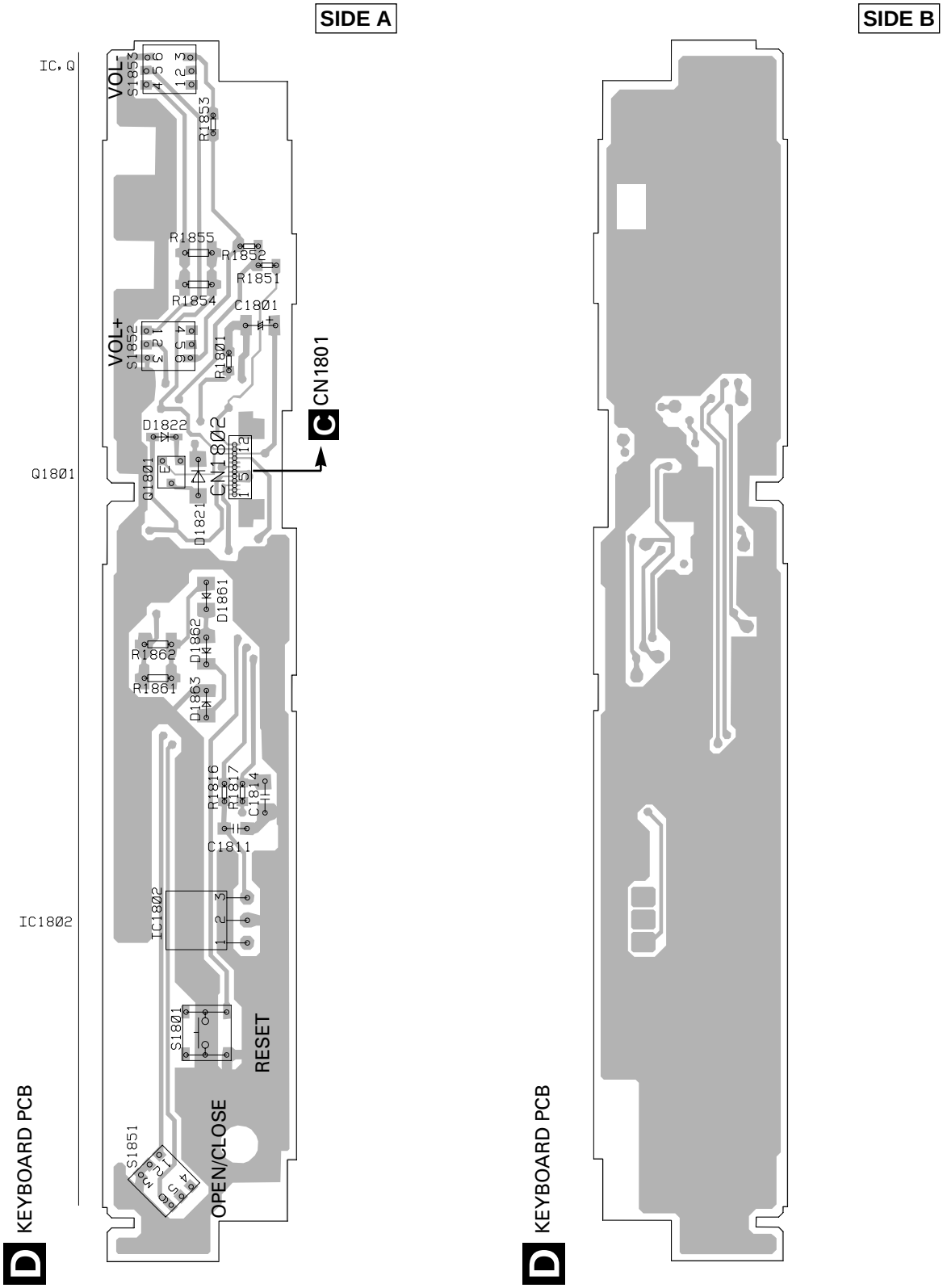


B CONNECTOR PCB

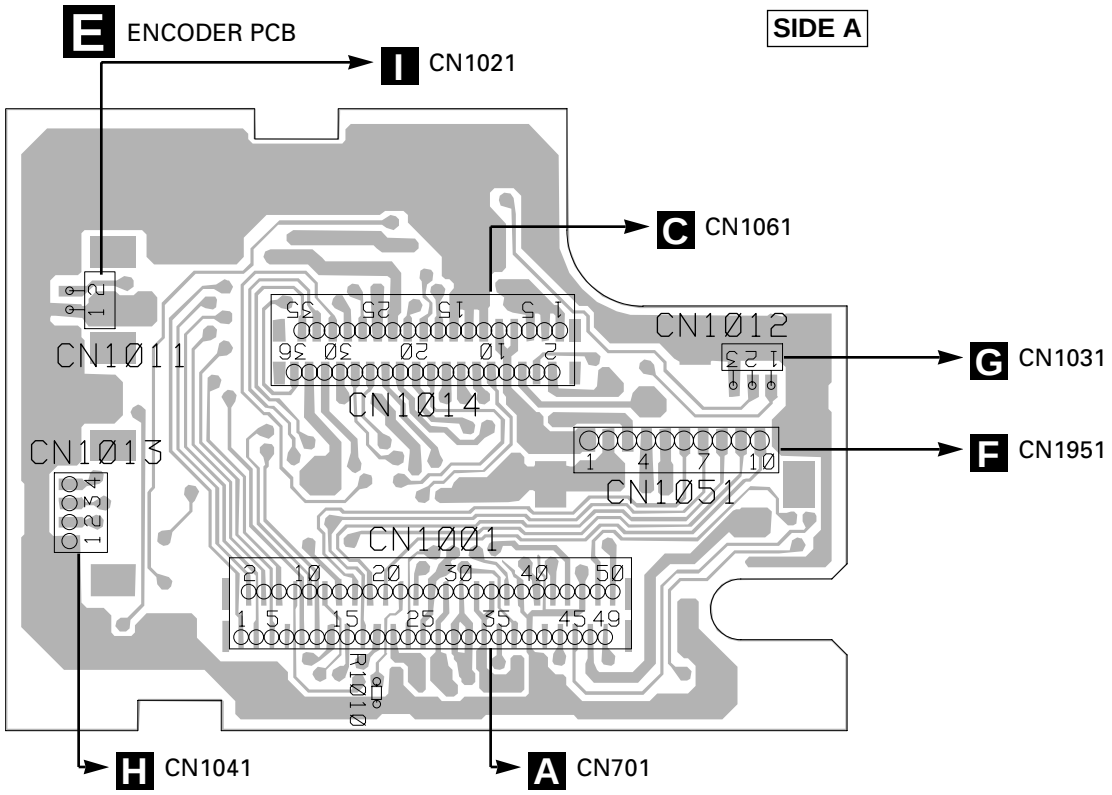
SIDE B

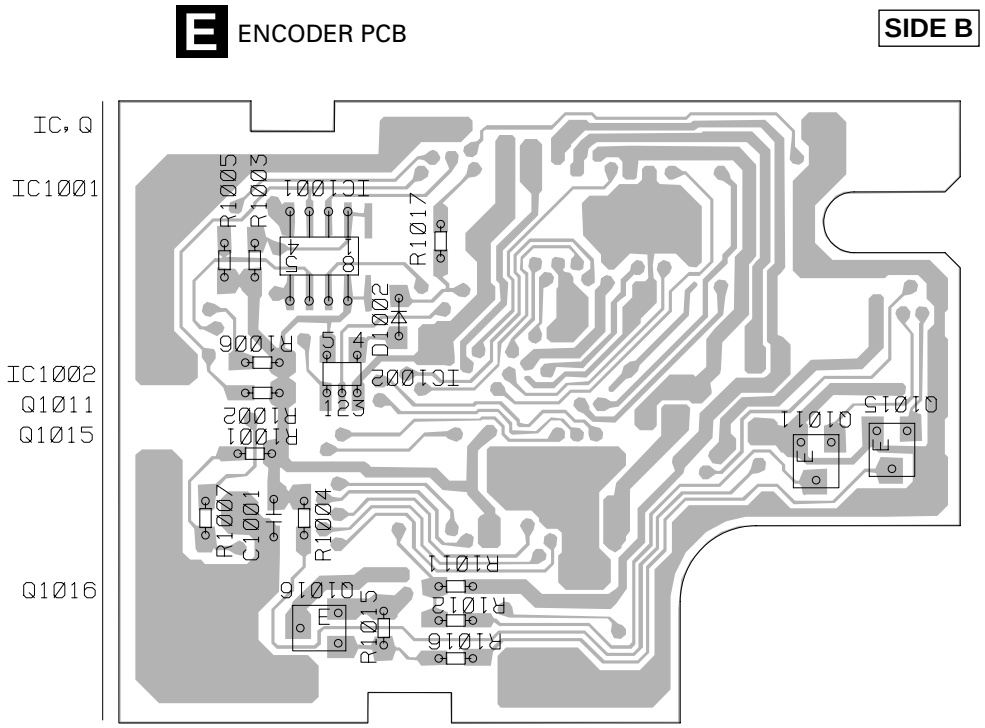


4.4 KEYBOARD PCB

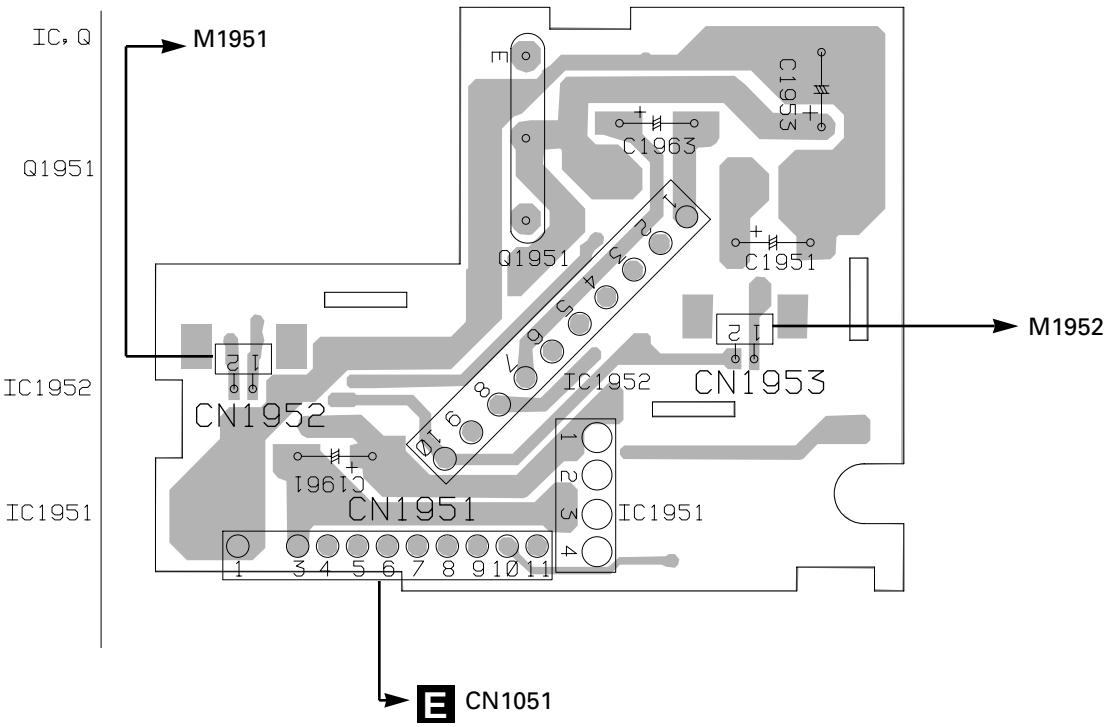


4.5 ENCODER UNIT

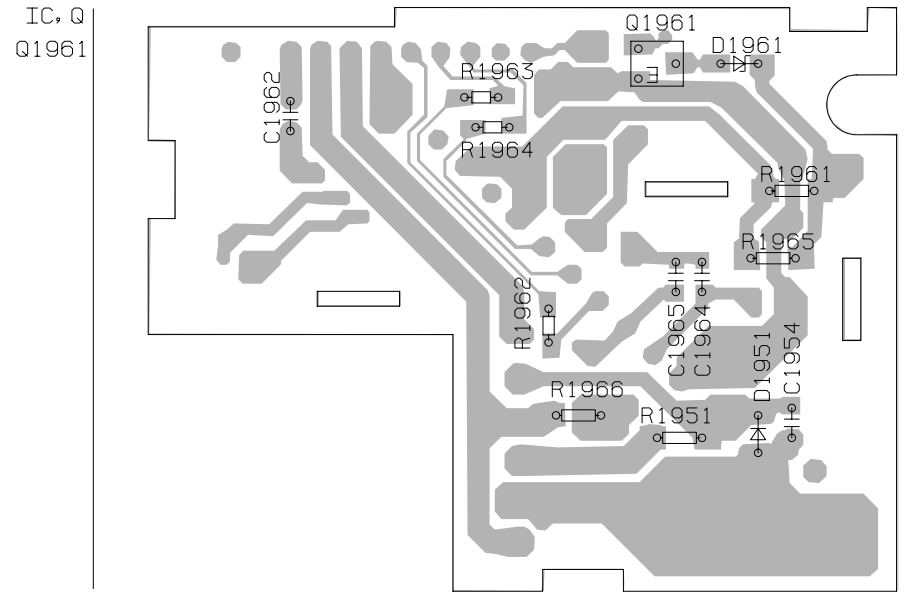




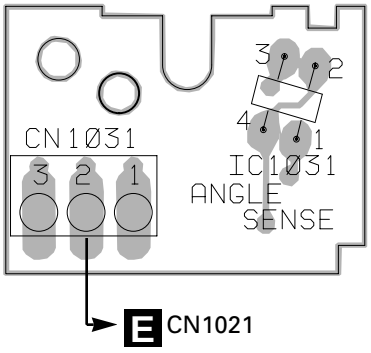
F MOTOR DRIVE PCB **SIDE A**



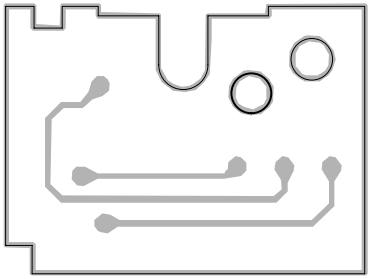
F MOTOR DRIVE PCB **SIDE B**



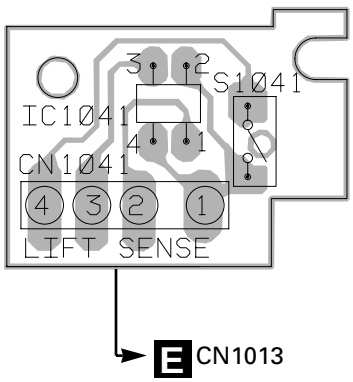
G ANGLE SENSE PCB SIDE A



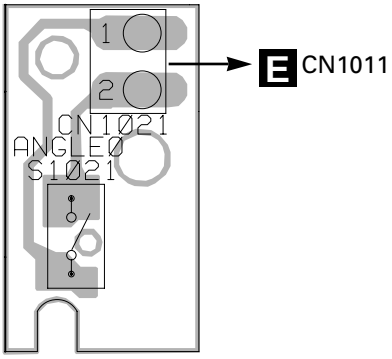
G ANGLE SENSE PCB SIDE B



H LIFT SENSE PCB



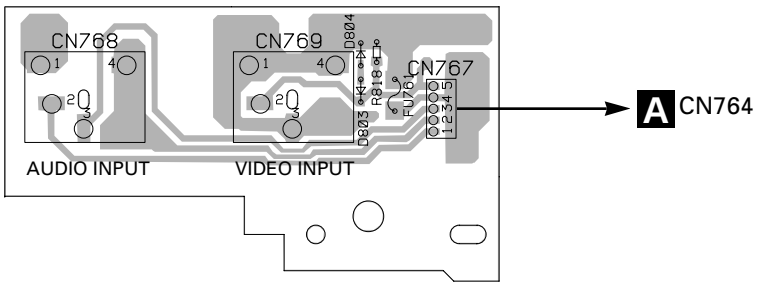
I ANGLE 0 PCB



4.6 INPUT PCB

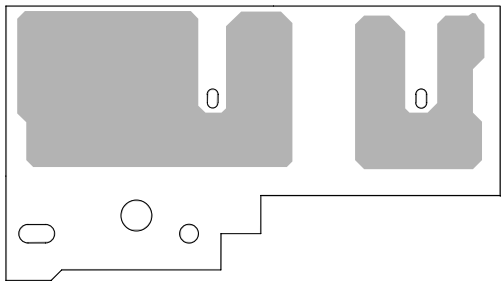
G INPUT PCB

SIDE A



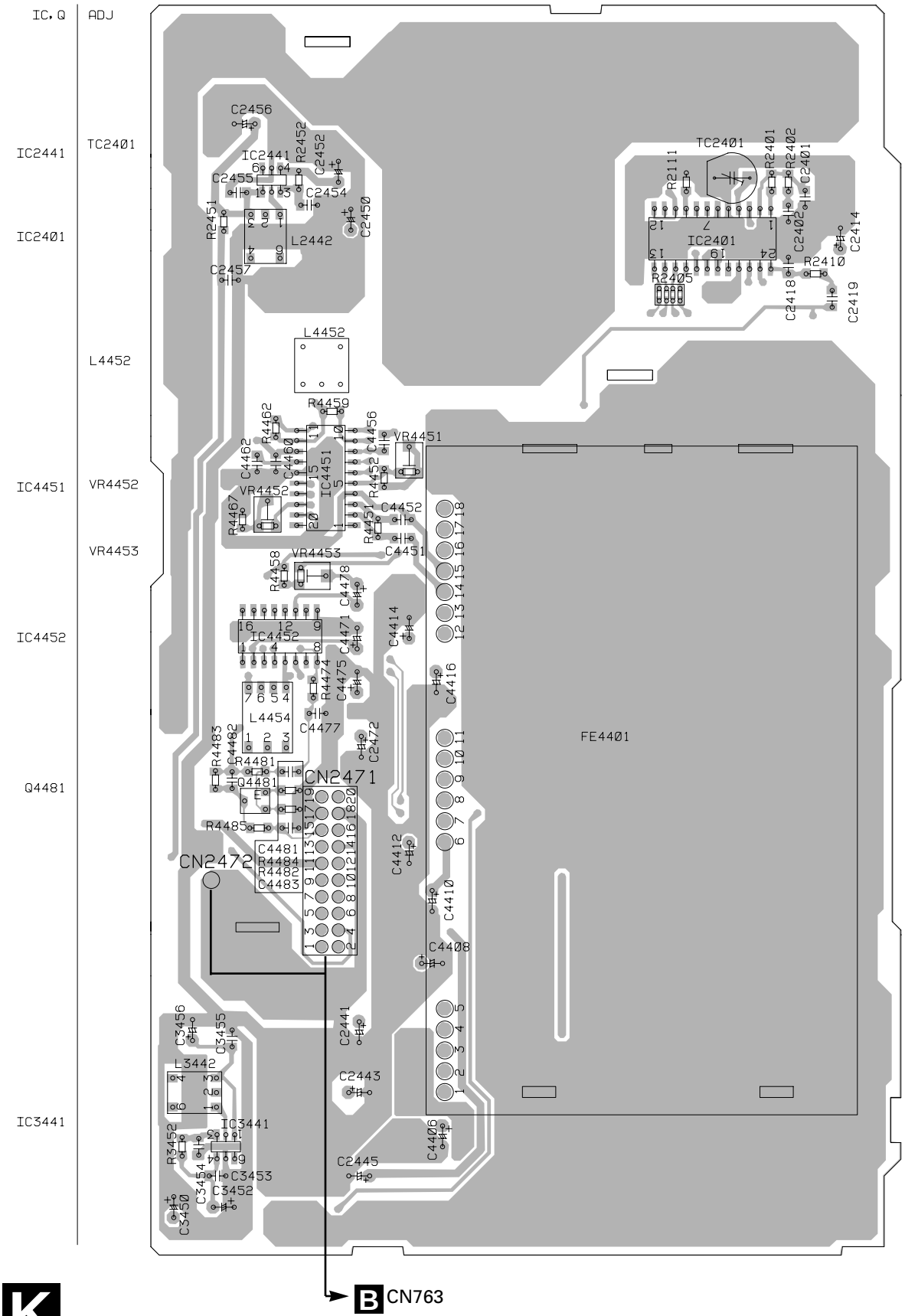
G INPUT PCB

SIDE B

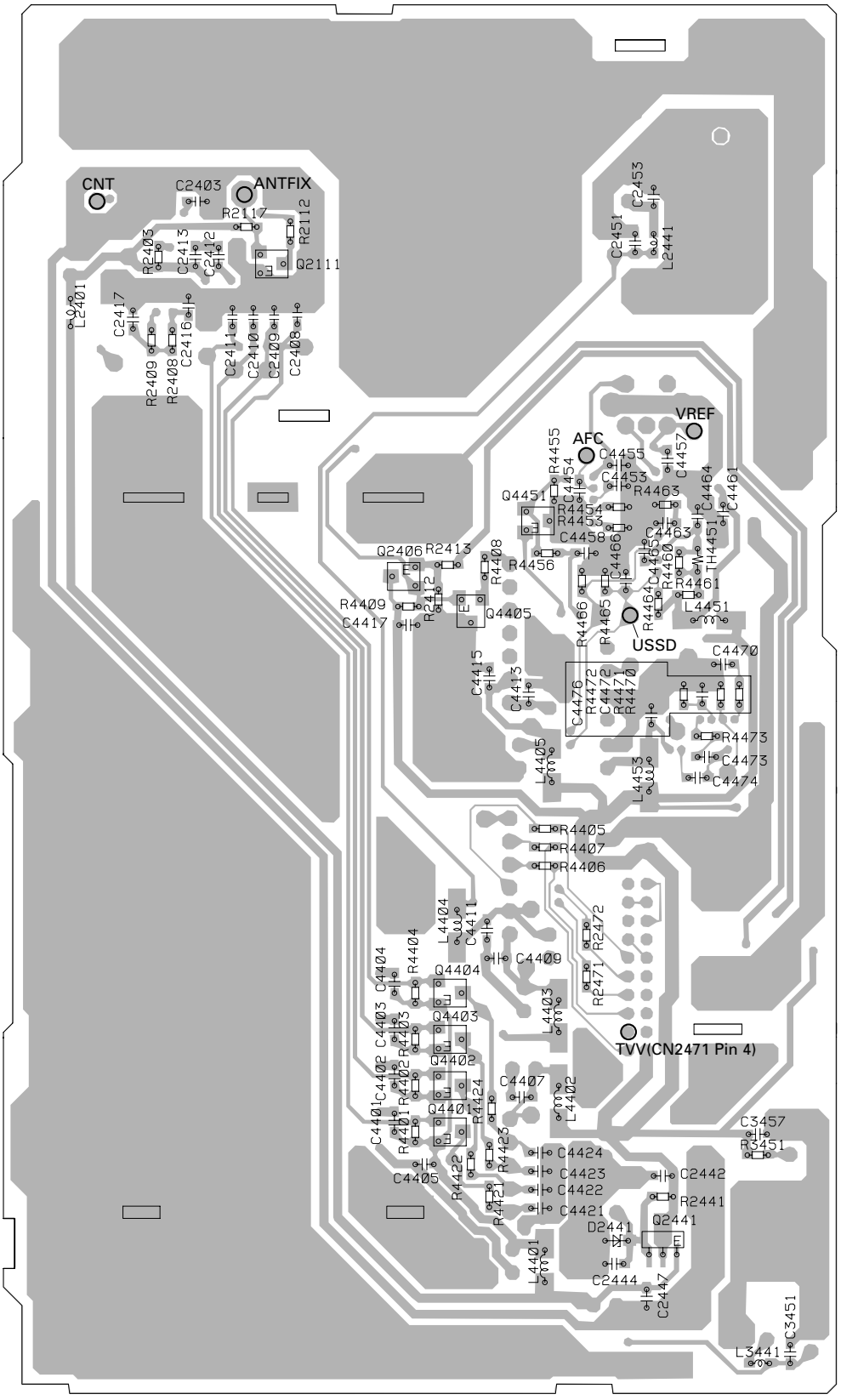


4.7 HIDEAWAY UNIT

K HIDEAWAY UNIT



HIDEAWAY UNIT



IC, Q

Q2111

Q4451

Q2406

Q4405

Q4404

Q4403

Q4402

Q4401

Q2441

5. ELECTRICAL PARTS LIST

NOTES:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

Mother Unit
Consists of
Mother PCB
Connector PCB
Input PCB

A B J Unit Number : CWM7194
Unit Name : Mother Unit

MISCELLANEOUS

Circuit Symbol and No.		Part Name	Part No.
IC	401	IC	BH1414K
IC	402	IC	NJM062V
IC	551	IC	PAJ001A
IC	601	IC	PE5162A
IC	751	IC	TA2050F
IC	761	IC	TA2050S
IC	771	IC	TA2050F
IC	791	IC	CA0008AM
IC	801	IC	CXA1114M
IC	825	IC	NJM4558M
IC	861	IC	TDA7052BT
IC	873	IC	NJM4558M
IC	901	IC	TA78L05F
Q	321	Transistor	2SC2412K
Q	331	Transistor	DTC144EK
Q	332	Transistor	DTC144EK
Q	451	Transistor	2SD1664
Q	491	Transistor	2SC4081
Q	509	Transistor	2SC2412K
Q	551	Transistor	DTC114EK
Q	558	Transistor	2SC2412K
Q	559	Transistor	2SA1037K
Q	581	Transistor	2SC2412K
Q	582	Transistor	2SC2412K
Q	591	Transistor	2SC2412K
Q	592	Transistor	DTA114EK
Q	614	Transistor	DTA144EK
Q	651	Transistor	DTA144EK
Q	654	Transistor	DTC144EK
Q	701	Transistor	2SA1385-Z
Q	702	Transistor	DTC114EK
Q	851	Transistor	2SC2412K
Q	852	Transistor	2SC2412K
Q	853	Transistor	FMG12
Q	861	Transistor	DTC144EK
Q	902	Transistor	2SA1036K
Q	903	Transistor	2SC2412K
Q	911	Transistor	2SA1036K
Q	912	Transistor	DTC144EK
Q	913	Transistor	2SD2396
Q	951	Transistor	2SD1760F5
Q	955	Transistor	2SA1385-Z
Q	956	Transistor	DTC114EK
Q	961	Transistor	2SD1664
Q	966	Transistor	2SA1036K
Q	967	Transistor	DTC144EK
Q	971	Transistor	2SD2396
Q	975	Transistor	2SD2396
D	401	Diode	MA338
D	451	Diode	UDZS5R6(B)
D	471	Diode	MA153
D	491	Diode	1SS355
D	501	Diode	1SS355
D	502	Diode	1SS355
D	503	Diode	1SS355
D	504	Diode	1SS355
D	505	Diode	1SS355
D	506	Diode	1SS355
D	515	Diode	1SS355
D	516	Diode	1SS355
D	517	Diode	1SS355
D	518	Diode	1SS355
D	535	Diode	1SS355
D	551	Diode	SC016-2
D	552	Diode	MA8180(M)
D	554	Diode	MA8082(M)
D	555	Diode	1SS355
D	556	Diode	1SS355
D	591	Diode	1SS355
D	721	Diode	MA152WK
D	801	Diode	UDZ2R0(B)
D	802	Diode	UDZ2R0(B)
D	803	Diode	UDZ2R0(B)
D	804	Diode	UDZ2R0(B)
D	851	Diode	MA152WA
D	901	Diode	SC016-2
D	911	Diode	MA8091(H)
D	915	Diode	SC016-2
D	951	Diode	MA8100(L)
D	961	Diode	UDZS5R6(B)
D	971	Diode	MA8100(L)
D	975	Diode	MA8100(L)
L	401	Inductor	LCTB2R2K2125
L	402	Inductor	LCTB2R2K2125
L	403	Inductor	LCTB68NM3216
L	404	Inductor	LCTB2R2K2125
L	471		CTX1081
L	552	Inductor	CTF1295
L	553	Inductor	CTF1295
L	558	Inductor	CTF1295
L	601	Inductor	LCTA150J3225
L	602	Inductor	LCTB150K2125
L	605	Inductor	LCTB2R2K2125
L	606	Inductor	LCTB150K2125
L	611	Inductor	CTF1306
L	612	Inductor	CTF1306
L	613	Inductor	CTF1306
L	702	Choke Coil 100µH	CTH1140
L	791	Inductor	LCTB2R2K2125
L	801	Inductor	LCTA100J3225

Circuit Symbol and No.		Part Name	Part No.
L	861	Chip-Inductor	LCTA2R2J3225
L	902	Inductor	CTF1295
RY	491	Relay	CSR1020
X	451	Radiator 7.600MHz	CSS1501
X	601	Radiator 6.290MHz	CSS1451
S	711	Switch(MODE)	CSH1053
VR	401	Semi-fixed 1.5kΩ(B)	CCP1339
VR	402	Semi-fixed 1.5kΩ(B)	CCP1339
VR	403	Semi-fixed 22kΩ(B)	CCP1346
VR	404	Semi-fixed 150KΩ(B)	CCP1351
VR	405	Semi-fixed 1kΩ(B)	CCP1338
FU	701	Fuse 2.5A	CEK1188
FU	702	Fuse 1.75A	CEK1177
FU	761	Fuse 2A	CEK1190
EF	604	EMI Filter	CCG1067
EF	605	EMI Filter	CCG1067
EF	606	EMI Filter	CCG1078

RESISTORS

R	321		RS1/10S822J
R	322		RS1/10S103J
R	323		RS1/10S471J
R	331		RS1/10S0R0J
R	332		RS1/10S0R0J
R	333		RS1/10S0R0J
R	334		RS1/10S472J
R	401		RS1/10S394J
R	402		RS1/10S394J
R	403		RS1/10S393J
R	404		RS1/10S393J
R	405		RS1/10S393J
R	412		RS1/16S123J
R	413		RS1/16S473J
R	416		RS1/16S563J
R	417		RS1/16S683J
R	418		RS1/16S683J
R	419		RS1/10S622J
R	420		RS1/16S824J
R	423		RS1/16S0R0J
R	424		RS1/10S222J
R	425		RS1/16S102J
R	427		RS1/10S820J
R	428		RS1/10S391J
R	429		RS1/10S820J
R	430		RS1/10S330J
R	431		RS1/10S0R0J
R	444		RS1/16S103J
R	451		RS1/10S821J
R	466		RS1/16S103J
R	471		RAB4C101J
R	472		RS1/10S560J
R	473		RS1/16S0R0J
R	474		RS1/16S0R0J
R	475		RS1/10S0R0J
R	491		RS1/10S273J
R	492		RS1/10S103J
R	493		RS1/10S0R0J
R	535		RS1/10S473J
R	536		RS1/10S473J
R	537		RS1/10S473J
R	538		RS1/10S473J
R	551		RS1/10S753J
R	552		RS1/10S363J
R	553		RS1/10S393J
R	554		RS1/10S563J
R	555		RS1/16S104J
R	556		RS1/16S104J
R	557		RS1/16S104J
R	558		RS1/10S104J

Circuit Symbol and No.		Part Name	Part No.
R	559		RS1/10S223J
R	560		RS1/10S103J
R	561		RN1/10SE1001D
R	573		RS1/10S102J
R	574		RS1/10S473J
R	575		RS1/10S223J
R	576		RS1/10S473J
R	577		RS1/10S473J
R	578		RS1/10S223J
R	579		RS1/10S473J
R	581		RS1/10S224J
R	582		RS1/10S224J
R	583		RS1/10S104J
R	584		RS1/10S104J
R	591		RS1/10S473J
R	592		RS1/10S223J
R	593		RS1/10S473J
R	594		RS1/10S223J
R	601		RAB4C681J
R	602		RAB4C681J
R	603		RAB4C681J
R	604		RAB4C681J
R	605		RAB4C681J
R	606		RAB4C681J
R	607		RAB4C681J
R	608		RAB4C681J
R	609		RAB4C681J
R	610		RAB4C681J
R	611		RA2CQ681J
R	612		RA2CQ470J
R	613		RS1/10S681J
R	614		RS1/16S681J
R	615		RS1/16S681J
R	616		RS1/10S103J
R	617		RS1/10S103J
R	618		RS1/10S681J
R	619		RS1/10S681J
R	620		RS1/10S473J
R	622		RS1/10S103J
R	623		RS1/10S393J
R	624		RS1/16S332J
R	625		RS1/16S332J
R	628		RS1/10S473J
R	629		RS1/10S473J
R	630		RS1/10S681J
R	633		RS1/10S333J
R	635		RS1/16S681J
R	636		RS1/16S681J
R	637		RS1/16S681J
R	638		RS1/16S681J
R	641		RS1/10S104J
R	642		RS1/10S104J
R	643		RS1/10S104J
R	654		RS1/10S473J
R	655		RS1/10S473J
R	659		RS1/16S473J
R	701		RS1/10S153J
R	702		RS1/4S122J
R	705		RS1/4S122J
R	706		RS1/16S0R0J
R	751		RS1/10S101J
R	752		RS1/10S223J
R	753		RS1/10S102J
R	754		RS1/10S102J
R	755		RS1/10S223J
R	756		RS1/10S101J
R	757		RS1/10S0R0J
R	761		RS1/10S101J
R	762		RS1/10S223J
R	763		RS1/10S102J

=====Circuit Symbol and No.	===Part Name	Part No.
R 764		RS1/10S102J
R 765		RS1/10S223J
R 767		RS1/10S101J
R 771		RS1/10S101J
R 772		RS1/10S223J
R 773		RS1/10S102J
R 774		RS1/10S102J
R 775		RS1/10S223J
R 776		RS1/10S101J
R 791		RS1/10S181J
R 792		RS1/10S181J
R 793		RS1/16S102J
R 794		RS1/16S102J
R 795		RS1/10S473J
R 796		RS1/10S473J
R 801		RS1/16S0R0J
R 804		RS1/10S0R0J
R 805		RS1/10S0R0J
R 806		RS1/10S563J
R 807		RS1/10S563J
R 808		RS1/10S563J
R 809		RS1/10S563J
R 810		RS1/10S622J
R 811		RS1/10S622J
R 812		RS1/10S563J
R 813		RS1/10S563J
R 815		RS1/10S101J
R 816		RS1/10S101J
R 817		RS1/10S750J
R 818		RS1/10S750J
R 831		RS1/10S182J
R 835		RS1/10S272J
R 839		RS1/10S682J
R 841		RS1/10S182J
R 845		RS1/10S272J
R 849		RS1/10S682J
R 851		RS1/10S471J
R 852		RS1/10S471J
R 853		RS1/10S821J
R 854		RS1/10S821J
R 855		RS1/10S104J
R 856		RS1/10S104J
R 863		RS1/10S103J
R 873		RS1/16S123J
R 874		RS1/16S123J
R 889		RS1/10S223J
R 890		RS1/10S223J
R 891		RS1/10S821J
R 892		RS1/10S0R0J
R 901		RS1/10S0R0J
R 904		RS1/10S562J
R 905		RS1/10S153J
R 911		RS1/10S223J
R 912		RS1/10S182J
R 913		RS1/10S102J
R 916		RS1/10S104J
R 918		RS1/10S473J
R 919		RS1/10S473J
R 951		RS1/10S681J
R 955		RS1/10S153J
R 956		RS1/4S122J
R 957		RS1/4S122J
R 961		RS1/10S681J
R 971		RS1/10S681J
R 972		RS1/10S0R0J
R 973		RS1/10S153J
R 974		RS1/10S472J
R 975		RS1/10S681J

CAPACITORS

=====Circuit Symbol and No.	===Part Name	Part No.
C 401		CKSQYB105K10
C 402		CKSQYB105K10
C 403		CCSQCH221J50
C 404		CCSQCH221J50
C 405		CKSRYB103K50
C 406		CKSRYB103K50
C 407		CKSQYB103K50
C 408		CKSQYB103K50
C 409		CKSRYB103K50
C 410		CKSRYB103K50
C 411		CKSQYB103K50
C 412		CKSQYB103K50
C 413		CKSQYB103K50
C 414		CKSQYB103K50
C 415		CKSQYB105K10
C 416		CKSQYB105K10
C 417		CKSRYB103K50
C 418		CEV101M10
C 419		CKSRYB103K50
C 420		CCSQCH220J50
C 421		CCSQCH220J50
C 422		CKSQYF105Z16
C 423		CSZS100M10
C 424		CCSRCH221J50
C 425		CSZS100M10
C 427		CKSYB475K10
C 429		CKSRYB224K10
C 430		CCSQCH471J50
C 431		CCSRCH820J50
C 433		CCSRCH150J50
C 434		CCSRCH330J50
C 435		CCSRCH180J50
C 436		CCSQCH271J50
C 437		CKSRYB103K50
C 438		CKSYB105K16
C 439		CKSRYB103K50
C 440		CKSQYB103K50
C 441		CCSQCH101J50
C 442		CCSQCH680J50
C 451		CKSQYB105K10
C 452		CKSQYB103K50
C 453		CEV101M10
C 462		CKSQYB103K50
C 463		CKSQYB103K50
C 471		CKSQYB103K50
C 472		CKSRYB472K50
C 491		CEJA101M16
C 509		CKSQYB103K50
C 551		CKSQYB103K50
C 552		CEHAT102M16
C 553		CKSQYB103K50
C 554		CEV101M10
C 555		CEV100M16
C 559		CKSQYB103K50
C 561		CKSQYF104Z50
C 591		CKSQYF104Z50
C 592		CKSQYF334Z25
C 601		CKSQYF104Z25
C 602		CEV101M10
C 603		CKSQYF104Z50
C 604		CKSQYB103K50
C 605		CKSQYB103K50
C 606		CKSQYB103K50
C 607		CKSQYB103K50
C 608		CKSQYB103K50

=====Circuit Symbol and No.		===Part Name	Part No.
C	609		CKSRYB103K50
C	652		CKSQYB103K50
C	701		CEJA101M16
C	702		CKSQYF104Z25
C	703		CEJA101M16
C	704		CKSQYF104Z25
C	705	100µF/16V	CCH1228
C	751		CEV1R0M50
C	752		CEV1R0M50
C	753		CEV100M16
C	754		CEV220M16
C	755		CEV1R0M50
C	756		CEV1R0M50
C	757		CKSQYB103K50
C	761		CEJA1R0M50
C	762		CEJA1R0M50
C	763		CEJA100M16
C	764		CEJA220M16
C	765		CEJA1R0M50
C	766		CEJA1R0M50
C	771		CKSYB105K16
C	772		CKSYB105K16
C	773		CEV100M16
C	774		CEV220M16
C	775		CKSYB105K16
C	776		CKSYB105K16
C	791		CKSQYB102K50
C	792		CKSQYB102K50
C	793		CKSQYF104Z50
C	801		CEJA330M16
C	804		CEJA330M16
C	805		CEJA330M16
C	806		CKSQYB105K10
C	807		CKSQYB105K10
C	808		CKSQYB105K10
C	809		CKSQYB105K10
C	810		CKSQYB105K10
C	811		CKSQYB105K10
C	812		CKSQYB105K10
C	813		CKSQYB105K10
C	815		CEJA100M16
C	816		CEV220M16
C	817		CKSQYB103K50
C	826	100µF/16V	CCH1228
C	827		CKSQYF104Z50
C	831		CKSQYB222K50
C	835		CCSQCH101J50
C	841		CKSQYB222K50
C	845		CCSQCH101J50
C	851		CEV100M16
C	852		CEV100M16
C	861		CEV101M10
C	862		CKSQYF104Z25
C	867		CKSQYF104Z25
C	871		CEV101M10
C	875		CKSQYB105K10
C	876		CKSQYB105K10
C	879		CKSQYB105K10
C	880		CKSQYB105K10
C	881		CKSQYB103K50
C	883		CKSQYB105K10
C	885		CKSQYF104Z50
C	901		CEHAT102M16
C	902		CKSQYF104Z50
C	906		CKSYB105K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	907		CKSQYF104Z25
C	908		CEV101M10
C	909		CKSQYB103K50
C	911	100µF/25V	CCH1316
C	912		CEHAR470M16
C	913		CKSQYF104Z25
C	951	100µF/25V	CCH1316
C	952	100µF/16V	CCH1228
C	953		CKSQYB103K50
C	954	100µF/25V	CCH1316
C	955		CKSQYB103K50
C	957	100µF/16V	CCH1228
C	958		CKSQYB103K50
C	959	100µF/16V	CCH1228
C	960		CKSQYB103K50
C	961	100µF/16V	CCH1228
C	962		CKSQYB103K50
C	963	100µF/16V	CCH1228
C	966		CKSQYB103K50
C	967	100µF/16V	CCH1228
C	970		CKSQYB103K50
C	971	100µF/16V	CCH1228
C	972		CKSQYB103K50
C	975	100µF/16V	CCH1228
C	976		CKSQYB103K50
C	977	100µF/25V	CCH1316
C	978		CKSQYB103K50

Encoder Unit
Consists of
Encoder PCB
Motor Drive PCB
Angle Sense PCB
Lift Sense PCB
Angle 0 PCB

E F G H I Unit Number : CWM6479
Unit Name : Encoder Unit

MISCELLANEOUS

IC	1001	IC	TC7W14F
IC	1951	IC	PQ09RA11
IC	1952	IC	M54649L
Q	1011	Transistor	DTC114EK
Q	1015	Transistor	DTC114EK
Q	1016	Transistor	2SA1036K
Q	1951	Transistor	2SD1707
Q	1961	Transistor	DTC114EK
D	1951	Diode	MA8100(L)
D	1961	Diode	MA8068(L)

RESISTORS

R	1001		RS1/10S473J
R	1002		RS1/10S473J
R	1003		RS1/10S472J
R	1004		RS1/10S112J
R	1005		RS1/10S472J
R	1006		RS1/10S112J
R	1007		RS1/10S0R0J
R	1011		RS1/10S102J
R	1012		RS1/10S102J
R	1015		RS1/10S223J
R	1016		RS1/10S562J
R	1017		RS1/10S0R0J
R	1951		RS1/4S331J
R	1961		RS1/4S102J
R	1962		RS1/10S102J
R	1963		RS1/10S102J
R	1964		RS1/10S102J
R	1965		RS1/4S102J

=====Circuit Symbol and No.	===Part Name	Part No.
CAPACITORS		
C 1001		CKSQYB104K16
C 1951		CSZSC100M16
C 1953		CEHAT102M16
C 1954		CKSQYB103K50
C 1961	100µF/16V	CCH1228
C 1962		CKSQYF104Z50
C 1963		CEV330M25
C 1964		CKSQYB223K50
C 1965		CKSQYB223K50

Monitor Unit
Consists of
Monitor PCB
Keyboard PCB

C D Unit Number : CWM7196
Unit Name : Monitor Unit

MISCELLANEOUS

IC	1151	IC	FA7610CN
IC	1211	IC	NJM2903V
IC	1251	IC	NJM082BV
IC	1301	IC	IR3Y26A1
IC	1351	IC	M62393FP
IC	1401		HCF0250
IC	1421	IC	NJM2235M
IC	1431	IC	CXA1585Q
IC	1491	IC	BA7602F
IC	1601	IC	PD5582A
IC	1602	IC	TC7W00FU
IC	1651	IC	TC74HC123AF
IC	1652	IC	TC7S08FU
IC	1653	IC	TC7S32FU
IC	1801	IC	SBX8035-H
IC	1802	IC	PNA4603H00LB
Q	1101	Transistor	2SC3518-Z
Q	1151	Transistor	2SA1036K
Q	1152	Transistor	DTC144EK
Q	1201	Transistor	2SC3518-Z
Q	1202	Transistor	2SC3518-Z
Q	1211	Transistor	2SC2412K
Q	1212	Transistor	2SC2412K
Q	1213	Transistor	2SD1767
Q	1221	Transistor	2SA1037K
Q	1251	Transistor	FMY3A
Q	1252	Transistor	FMY4A
Q	1301	Transistor	DTA114EU
Q	1401	Transistor	2SC2412K
Q	1402	Transistor	2SA1036K
Q	1403	Transistor	2SA1036K
Q	1404	Transistor	2SC2412K
Q	1405	Transistor	2SA1036K
Q	1421	Transistor	2SC2412K
Q	1422	Transistor	2SA1036K
Q	1461	Transistor	2SA1036K
Q	1462	Transistor	2SA1036K
Q	1463	Transistor	2SA1036K
Q	1464	Transistor	2SC2412K
Q	1611	Transistor	2SC4081
Q	1612	Transistor	2SC4081
Q	1613	Transistor	2SC4081
Q	1801	Transistor	DTA144EK
D	1101	Diode	1SS250
D	1102	Diode	SFPB-54V

=====Circuit Symbol and No.	===Part Name	Part No.
D 1103	Diode	SFPB-54V
D 1104	Diode	1SS250
D 1105	Diode	UDZ18(B)
D 1106	Diode	DTZ16(C)
D 1341	Diode	1SS355
D 1651	Diode	1SS355
D 1821	LED	CL140DCD(AL1AL2)
D 1822	Diode	1SS355
D 1901	LED	SML210PT
L 1102	Coil	CTH1195
L 1103	Inductor	LCTA101J3225
L 1104	Inductor	CTF1311
L 1105	Choke Coil 100µH	CTH1196
L 1106	Inductor	LCTA101J3225
L 1153	Inductor	LCTB100K2125
L 1201	Choke Coil 82µH	CTH1200
L 1211	Inductor	LCTA101J3225
L 1251	Inductor	LCTA101J3225
L 1252	Inductor	LCTA101J3225
L 1301	Inductor	LCTA220J3225
L 1321	Inductor	LCTB100K2125
L 1351	Inductor	LCTB2R2K2125
L 1352	Inductor	LCTB2R2K2125
L 1401	Inductor	LCTB100K2125
L 1431	Inductor	LCTA150J3225
L 1491	Inductor	LCTB2R2K2125
L 1601	Inductor	LCTA101J3225
L 1603	Inductor	CTF1306
L 1604	Inductor	CTF1306
L 1605	Inductor	CTF1306
L 1702	Inductor	LCTB100K2125
L 1703	Inductor	LCTB100K2125
L 1704	Inductor	LCTB100K2125
T 1101		CTT1088
T 1201		CTT1087
T 1202		CTT1087
CF 1401	Filter	CTF1474
CF 1402	Filter	CTF1341
X 1431	Crystal Resonator 3579.545KHz	CSS1317
S 1751	Switch	CSG1107
S 1752	Switch	CSG1108
S 1753	Switch	CSG1107
S 1754	Switch	CSG1107
S 1755	Push Switch	CSG1116
S 1801	Switch	CSG1110
S 1851	Switch	CSG1107
S 1852	Switch	CSG1107
S 1853	Switch	CSG1108
VR 1151	Semi-fixed 1kΩ(B)	CCP1338
VR 1251	Semi-fixed 10kΩ(B)	CCP1344
VR 1301	Semi-fixed 33kΩ(B)	CCP1347
VR 1302	Semi-fixed 10kΩ(B)	CCP1344
VR 1303	Semi-fixed 33kΩ(B)	CCP1347
VR 1304	Semi-fixed 33kΩ(B)	CCP1347
VR 1305	Semi-fixed 33kΩ(B)	CCP1347
VR 1306	Semi-fixed 33kΩ(B)	CCP1347
VR 1307	Semi-fixed 33kΩ(B)	CCP1347
VR 1308	Semi-fixed 33kΩ(B)	CCP1347
VR 1309	Semi-fixed 33kΩ(B)	CCP1347
VR 1401	Semi-fixed 470Ω(B)	CCP1336
VR 1431	Semi-fixed 470Ω(B)	CCP1336
VR 1451	Semi-fixed 33kΩ(B)	CCP1347
FU 1202	Fuse 1.75A	CEK1177
FU 1901	Fuse 1.75A	CEK1177

=====Circuit Symbol and No.		===Part Name	Part No.
EF	1601	EMI Filter	CCG1067
EF	1602	EMI Filter	CCG1067
EF	1603	EMI Filter	CCG1067
EF	1604	EMI Filter	CCG1067
EF	1651	EMI Filter	CCG1067
EF	1652	EMI Filter	CCG1067
EF	1801	EMI Filter	CCG1067
BZ	1001	Buzzer	CPV1012
TP	1221	Checker Chip	CKF1031

RESISTORS

R	1101		RS1/10S751J
R	1102		RS1/10S123J
R	1103		RS1/10S181J
R	1104		RS1/10S123J
R	1151		RS1/10S223J
R	1152		RS1/10S103J
R	1154		RS1/10S103J
R	1155		RS1/10S222J
R	1156		RS1/10S102J
R	1157		RS1/10S0R0J
R	1158		RS1/10S564J
R	1159		RS1/10S911J
R	1160		RS1/10S684J
R	1161		RS1/10S333J
R	1162		RS1/10S184J
R	1163		RS1/10S0R0J
R	1211		RS1/4S152J
R	1212		RS1/10S103J
R	1213		RS1/16S472J
R	1214		RS1/10S103J
R	1215		RS1/4S471J
R	1216		RS1/4S471J
R	1217		RS1/16S472J
R	1218		RS1/16S223J
R	1220		RS1/16S103J
R	1221		RS1/16S103J
R	1222		RS1/16S104J
R	1223		RS1/16S153J
R	1224		RS1/16S153J
R	1226		RS1/16S473J
R	1227		RS1/16S223J
R	1228		RS1/4S471J
R	1229		RS1/10S271J
R	1236		RS1/16S392J
R	1237		RS1/16S682J
R	1238		RS1/16S682J
R	1239		RS1/16S103J
R	1251		RS1/16S303J
R	1252		RS1/16S473J
R	1253		RS1/16S223J
R	1254		RS1/16S913J
R	1255		RS1/16S113J
R	1256		RS1/16S363J
R	1257		RS1/16S473J
R	1258		RS1/16S101J
R	1259		RS1/16S153J
R	1260		RS1/16S100J
R	1261		RS1/16S153J
R	1262		RS1/16S100J
R	1302		RS1/16S183J
R	1303		RS1/16S822J
R	1304		RS1/16S103J
R	1305		RS1/16S683J
R	1306		RS1/16S473J
R	1308		RS1/16S303J

=====Circuit Symbol and No.		===Part Name	Part No.
R	1309		RS1/16S153J
R	1312		RS1/16S303J
R	1313		RS1/16S153J
R	1315		RN1/16SE4702D
R	1316		RS1/16S273J
R	1317		RS1/16S153J
R	1319		RS1/16S303J
R	1321		RS1/16S153J
R	1323		RS1/16S303J
R	1324		RS1/16S153J
R	1326		RS1/16S103J
R	1327		RS1/16S243J
R	1329		RS1/16S473J
R	1331		RS1/16S103J
R	1333		RS1/16S101J
R	1334		RS1/16S101J
R	1335		RS1/16S101J
R	1336		RS1/16S101J
R	1337		RS1/16S101J
R	1339		RS1/16S102J
R	1340		RS1/16S271J
R	1341		RS1/16S123J
R	1344		RN1/16SE3302D
R	1345		RN1/16SE2402D
R	1346		RS1/16S102J
R	1351		RS1/16S103J
R	1352		RS1/16S101J
R	1353		RS1/16S101J
R	1402		RS1/16S103J
R	1403		RS1/16S103J
R	1406		RS1/16S102J
R	1407		RS1/16S102J
R	1410		RS1/16S102J
R	1411		RS1/16S511J
R	1412		RS1/16S102J
R	1413		RS1/16S102J
R	1414		RS1/16S102J
R	1415		RS1/16S102J
R	1416		RS1/16S393J
R	1417		RS1/16S393J
R	1418		RS1/16S102J
R	1419		RS1/16S102J
R	1421		RS1/16S183J
R	1422		RS1/16S273J
R	1423		RS1/16S0R0J
R	1425		RS1/16S102J
R	1426		RS1/16S102J
R	1427		RS1/16S683J
R	1428		RS1/16S683J
R	1431		RS1/16S182J
R	1432		RS1/16S392J
R	1433		RS1/16S224J
R	1434		RS1/16S152J
R	1435		RS1/16S471J
R	1436		RS1/16S331J
R	1437		RS1/16S751J
R	1438		RS1/16S471J
R	1439		RS1/16S331J
R	1440		RS1/16S751J
R	1441		RS1/16S471J
R	1442		RS1/16S331J
R	1443		RS1/16S751J
R	1444		RS1/16S105J
R	1445		RS1/16S473J
R	1446		RS1/16S102J

=====Circuit Symbol and No.		===Part Name	Part No.
R	1447		RS1/16S103J
R	1448		RS1/16S103J
R	1449		RS1/16S224J
R	1450		RS1/16S514J
R	1452		RS1/16S101J
R	1453		RS1/16S101J
R	1456		RS1/16S223J
R	1457		RN1/10SE2402D
R	1458		RS1/16S104J
R	1459		RS1/16S101J
R	1601		RS1/16S105J
R	1602		RS1/16S0R0J
R	1603		RAB4C681J
R	1605		RS1/16S101J
R	1606		RS1/16S0R0J
R	1611		RS1/16S102J
R	1612		RS1/16S392J
R	1613		RS1/16S392J
R	1614		RS1/16S103J
R	1615		RS1/16S102J
R	1616		RS1/16S392J
R	1617		RS1/16S392J
R	1618		RS1/16S103J
R	1619		RS1/16S102J
R	1620		RS1/16S392J
R	1621		RS1/16S392J
R	1622		RS1/16S103J
R	1651		RS1/16S102J
R	1652		RS1/16S473J
R	1653		RS1/16S153J
R	1654		RN1/16SE5601D
R	1655		RS1/16S101J
R	1659		RS1/16S101J
R	1701		RS1/16S0R0J
R	1703		RS1/16S0R0J
R	1738		RS1/16S0R0J
R	1751		RS1/10S0R0J
R	1752		RS1/10S102J
R	1753		RS1/10S222J
R	1754		RS1/10S562J
R	1755		RS1/10S0R0J
R	1756		RS1/4S681J
R	1757		RS1/4S821J
R	1758		RS1/4S821J
R	1759		RS1/4S681J
R	1781		RS1/16S681J
R	1782		RS1/10S1R0J
R	1801		RS1/10S681J
R	1816		RS1/10S101J
R	1817		RS1/10S104J
R	1851		RS1/10S102J
R	1852		RS1/10S222J
R	1853		RS1/10S562J
R	1854		RS1/4S681J
R	1855		RS1/4S821J

CAPACITORS

=====Circuit Symbol and No.		===Part Name	Part No.
C	1104	22µF	CCG1074
C	1105		CKSQYB103K50
C	1106		CEV220M35
C	1107		CKSQYF104Z50
C	1108		CEV100M25
C	1109		CKSQYF104Z50
C	1110	15µF/12.5V	CCH1225
C	1111		CKSQYF104Z50
C	1112	100µF/16V	CCH1228
C	1113		CKSQYF104Z50
C	1114	15µF/12.5V	CCH1225
C	1115		CKSQYF104Z50
C	1116	100µF/16V	CCH1228
C	1117		CKSQYF104Z50
C	1118		CEV220M35
C	1119		CKSQYF104Z50
C	1120		CEV100M25
C	1121		CKSQYF104Z50
C	1151		CEV220M35
C	1152		CKSQYF104Z50
C	1153		CCSQCH122J50
C	1155		CKSQYB393K25
C	1156		CSZSR100M6R3
C	1157		CKSQYB102K50
C	1158		CKSQYF104Z50
C	1205		CFHSN104J50
C	1206		CASAQ470M16
C	1207	0.12µF	CCE1027
C	1211		CKSQYF104Z50
C	1213		CKSQYB103K50
C	1216		CFHSQ822J16
C	1217		CEV101M10
C	1218		CSZSC100M16
C	1219		CCSRCH102J25
C	1241		CASAQ680M16
C	1251		CEV220M35
C	1252		CEV220M35
C	1253		CKSQYF104Z50
C	1254		CKSQYF104Z50
C	1255		CKSQYF105Z25
C	1256		CKSQYF104Z50
C	1257		CKSQYF105Z25
C	1258		CKSQYF104Z50
C	1301		CEV101M10
C	1302		CKSRYB103K50
C	1303		CKSRYB103K50
C	1304		CKSRYB103K50
C	1305		CKSRYB103K50
C	1306		CSZS2R2M6R3
C	1307		CKSRYB103K50
C	1308		CKSRYB103K50
C	1309		CKSRYB103K50
C	1311		CKSRYB103K50
C	1312		CKSQYF105Z25
C	1313		CKSRYB103K50
C	1314		CKSRYB103K50
C	1315		CKSRYB103K50
C	1316		CSZS1R0M16
C	1317		CKSRYB103K50
C	1318		CKSRYB103K50
C	1322		CEV101M10
C	1323		CSZS1R0M16
C	1324		CSZS1R0M16
C	1325		CSZS4R7M6R3
C	1326		CKSRYB103K50
C	1327		CKSRYB103K50
C	1328		CKSRYB103K50
C	1329		CKSRYB104K16
C	1341		CCSRCH102J25
C	1351		CKSRYB103K50
C	1352		CEV101M10
C	1353		CSZST470M6R3
C	1354		CKSQYB103K50
C	1401		CEV470M16
C	1402		CKSQYF104Z50

Circuit Symbol and No.	Part Name	Part No.
C 1403		CEV101M10
C 1404		CKSQYB102K50
C 1405		CCSRCH271J50
C 1414		CCSRCH102J25
C 1421		CSZST470M6R3
C 1423		CKSQYB105K10
C 1424		CKSQYB105K10
C 1425		CKSQYF104Z50
C 1426		CKSQYF104Z50
C 1431		CEV330M10
C 1432		CKSRYF104Z25
C 1433		CKSQYF105Z25
C 1434		CKSRYB104K16
C 1435		CCSRCH100D50
C 1436		CCSRCH300J50
C 1441		CSZS4R7M6R3
C 1442		CKSRYF473Z25
C 1444		CSZS4R7M6R3
C 1445		CKSRYF473Z25
C 1446		CKSRYF473Z25
C 1447		CKSQYF105Z25
C 1448		CSZSC220M6R3
C 1449		CSZSC220M6R3
C 1451		CKSRYF104Z25
C 1452		CKSRYF104Z25
C 1453		CKSQYF474Z16
C 1454		CKSQYF474Z16
C 1455		CKSRYF104Z25
C 1491		CKSQYB105K10
C 1492		CKSQYB105K10
C 1493		CKSQYB105K10
C 1494		CKSQYB105K10
C 1495		CKSQYB105K10
C 1496		CKSQYB105K10
C 1497		CKSQYF104Z50
C 1601		CEV330M10
C 1604		CKSQYB103K50
C 1606		CKSQYF104Z50
C 1651		CKSQYB104K50
C 1652		CCSQCH471J50
C 1653		CCSQCH471J50
C 1654		CKSRYF104Z16
C 1655		CKSRYF104Z16
C 1701		CKSQYB223K50
C 1703		CKSQYB223K50
C 1706		CSZS1R0M25
C 1707		CSZS1R0M25
C 1711		CEV101M10
C 1712		CEV101M10
C 1713		CKSQYB103K50
C 1714		CKSQYB103K50
C 1715		CKSQYB103K50
C 1801		CSZSR330M10
C 1802		CKSQYB103K50
C 1803		CASAQ680M10
C 1811		CKSQYB103K50
C 1814		CKSYB475K10

K Unit Number : CWM7195
Unit Name : Hideaway Unit

MISCELLANEOUS

Q	2111	Transistor	DTC144EK
Q	2406	Transistor	2SC2412K
Q	2441	Transistor	2SD1664
Q	4401	Transistor	DTA114EK
Q	4402	Transistor	DTA114EK
Q	4403	Transistor	DTA114EK
Q	4404	Transistor	DTA114EK
Q	4405	Transistor	2SA1037K
Q	4451	Transistor	2SA1037K
Q	4481	Transistor	2SC2412K
D	2441	Diode	UDZS5R6(B)
IC	2401	IC	CM0018AM
IC	3441	IC	TK11819M
IC	4451	IC	LA1145M
IC	4452	IC	LA2120M
L	2401	Inductor	LCTA150J3225
L	3441	Inductor	LCTB120K2125
L	3442	Transformer	CTX1053
L	4401	Chip-Inductor	LCTA2R2J3225
L	4402	Chip-Inductor	LCTA2R2J3225
L	4403	Chip-Inductor	LCTA2R2J3225
L	4404	Inductor	LCTA150J3225
L	4405	Chip-Inductor	LCTA2R2J3225
L	4451	Inductor	LCTA150J3225
L	4452	Coil	CTC1029
L	4453	Chip-Inductor	LCTA2R2J3225
L	4454	Coil	CTX1049
TC	2401	Trimmer	CCL1048
TH	4451	Thermistor	TN20-3U473K
VR	4452	Semi-fixed 10kΩ(B)	CCP1344
VR	4453	Semi-fixed 47kΩ(B)	CCP1348
FE	4401		CWB1085

RESISTORS

R	2111		RS1/10S102J
R	2112		RS1/10S331J
R	2117		RS1/10S563J
R	2401		RS1/10S393J
R	2402		RS1/10S223J
R	2403		RS1/10S123J
R	2405		RAB4C101J
R	2408		RS1/10S223J
R	2409		RS1/10S473J
R	2410		RS1/10S151J
R	2412		RS1/10S101J
R	2413		RS1/10S100J
R	2441		RS1/10S102J
R	2471		RS1/10S102J
R	2472		RS1/10S102J
R	3451		RS1/10S100J
R	3452		RS1/10S102J
R	4405		RS1/10S102J
R	4406		RS1/10S102J
R	4407		RS1/10S102J
R	4408		RS1/10S101J
R	4409		RS1/10S102J
R	4421		RS1/10S0R0J
R	4422		RS1/10S0R0J
R	4423		RS1/10S0R0J
R	4424		RS1/10S0R0J
R	4451		RS1/10S331J
R	4452		RS1/10S513J
R	4453		RS1/10S822J
R	4454		RS1/10S123J
R	4455		RS1/10S753J
R	4456		RS1/10S333J
R	4458		RS1/10S102J
R	4459		RS1/10S562J
R	4460		RS1/10S154J
R	4461		RS1/10S223J
R	4462		RS1/10S682J
R	4463		RS1/10S393J
R	4464		RS1/10S103J
R	4465		RS1/10S103J

=====Circuit Symbol and No.	===Part Name	Part No.
R 4466		RS1/10S622J
R 4467		RS1/10S183J
R 4470		RS1/10S822J
R 4471		RS1/10S473J
R 4472		RS1/10S682J
R 4473		RS1/10S103J
R 4474		RS1/10S332J
R 4481		RS1/10S563J
R 4482		RS1/10S103J
R 4483		RS1/10S332J
R 4484		RS1/10S681J
R 4485		RS1/10S102J

CAPACITORS

C 2401		CKSQYB102K50
C 2402		CKSQYB153K50
C 2403		CCSQTH180J50
C 2408		CKSQYB681K50
C 2409		CKSQYB681K50
C 2410		CKSQYB681K50
C 2411		CKSQYB681K50
C 2412		CKSQYB223K50
C 2413		CKSQYB103K50
C 2414		CEJA470M10
C 2416		CKSQYB102K50
C 2417		CKSQYB102K50
C 2418		CKSQYB152K50
C 2419		CKSQYB224K25
C 2441		CEJA101M16
C 2442		CKSQYB103K50
C 2443		CEJA101M10
C 2444		CKSQYB473K50
C 2445		CEJA221M6R3
C 2447		CKSQYB104K50
C 2472		CEJA101M16
C 3450		CEJA4R7M35
C 3451		CKSQYB103K50
C 3452		CEJA4R7M35
C 3453		CKSQYB103K50
C 3454		CKSQYB104K50
C 3455		CKSQYB103K50
C 3456		CEJA101M10
C 3457		CKSQYB104K50
C 4401		CKSQYB333K50
C 4402		CKSQYB333K50
C 4403		CKSQYB333K50
C 4404		CKSQYB333K50
C 4405		CKSQYB223K50
C 4406		CEJA100M16
C 4407		CKSQYB473K50
C 4408		CCH1019
C 4409		CKSQYB103K50
C 4410		CCH1019
C 4411		CKSQYB103K50
C 4412		CEAS220M50
C 4413		CKSQYB103K50
C 4414		CEJA2R2M50
C 4415		CKSQYB103K50
C 4416		CCH1019
C 4417		CKSQYB103K50
C 4451		CKSQYB103K50
C 4452		CKSQYB223K50
C 4453		CCSQCH101J50
C 4454		CKSQYB105K16

=====Circuit Symbol and No.	===Part Name	Part No.
4455		CCSQCH220J50
C 4456		CKSQYB105K16
C 4457		CKSQYB473K50
C 4458		CKSQYB103K50
C 4460		CKSQYB103K50
C 4461		CKSQYB105K16
C 4462		CKSQYB223K50
C 4463		CKSQYB104K50
C 4464		CKSQYB103K50
C 4465		CKSQYB223K50
C 4466		CKSQYB103K50
C 4470		CKSQYB103K50
C 4471		CEJA220M10
C 4472		CKSQYB102K50
C 4473		CKSQYB682K50
C 4474		CKSQYB272K50
C 4475		CEJA1R0M50
C 4476		CKSQYB103K50
C 4477		CKSQYB153K50
C 4478		CEJA1R0M50
C 4481		CKSQYB104K50
C 4482		CKSQYB153K50
C 4483		CKSQYB333K50

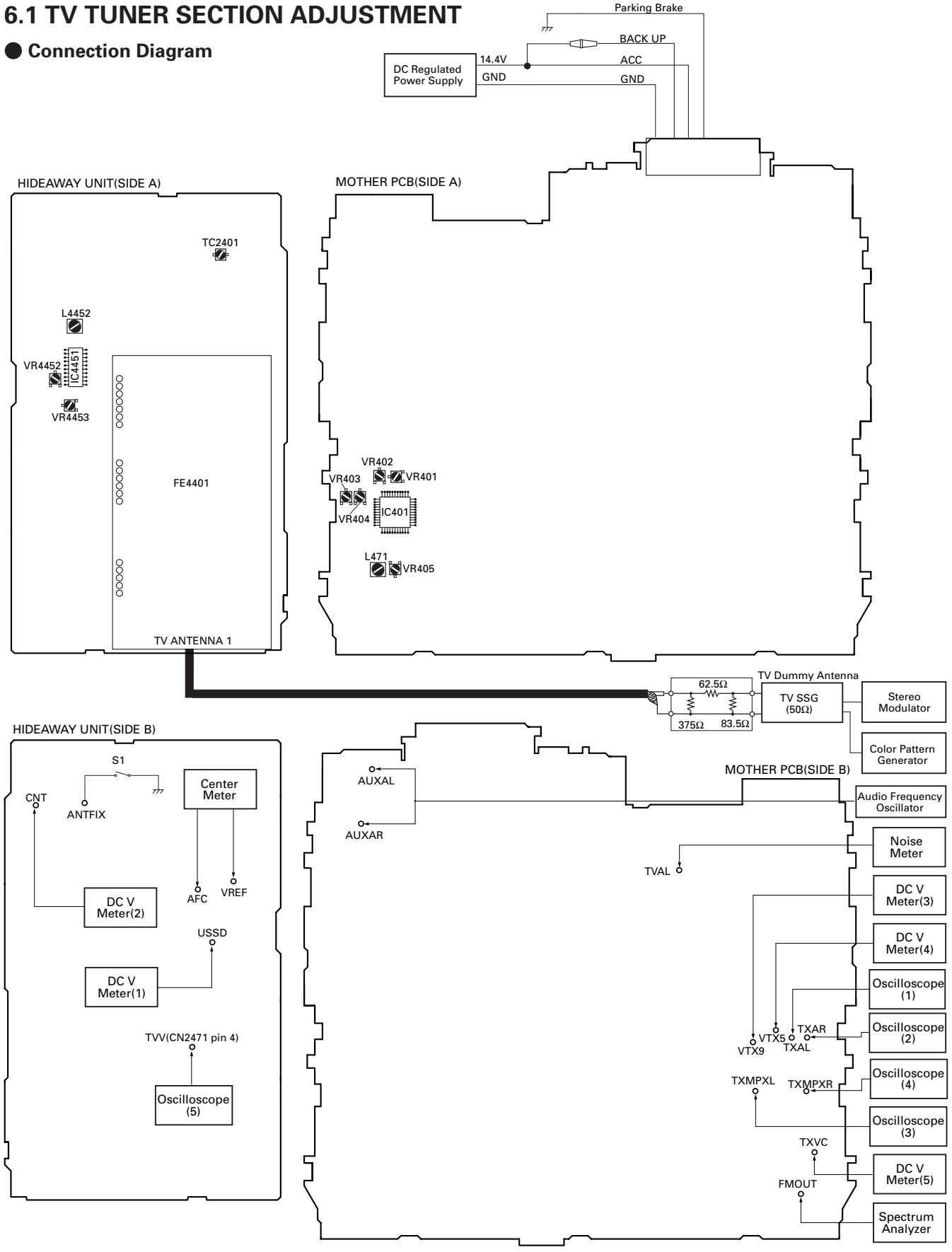
MIscellaneous Parts List

IC	1031	Photo-interrupter	GP2L24B
IC	1041	Photo-interrupter	GP2L24B
S	1021	Switch(ANGLE O SENSOR)	CSN1025
S	1041	Switch(LIFT SENSOR)	CSN1012
M	1951	Motor Unit(POSITION)	CXB3228
M	1952	Motor Unit(ANGLE)	CXB3229
		Speaker	CPV1049
		LCD Module	CWX2497

6. ADJUSTMENT

6.1 TV TUNER SECTION ADJUSTMENT

● Connection Diagram

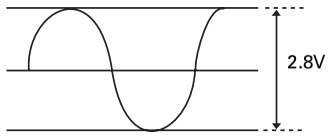
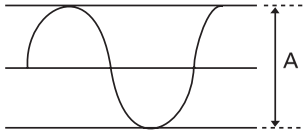
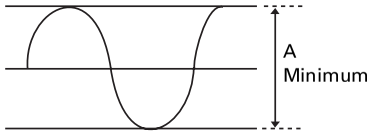


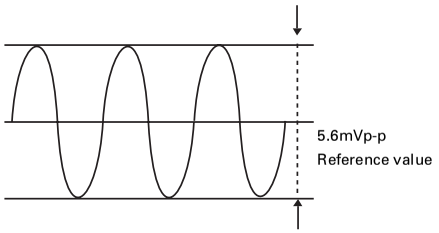
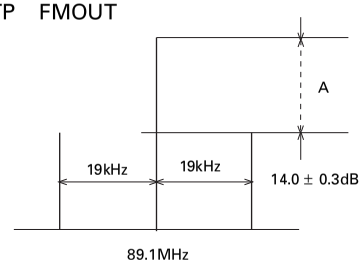
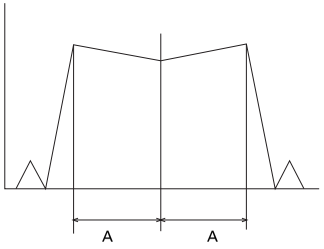
TV TUNER SECTION ADJUSTMENT

* The TV sensitivity indication shall be based on the voltage appearing at the 75-ohm (UN BAL) load side and shall be defined by the video carrier level.
* Shall be fixed to antenna 1 to make adjustments with TP ANTFIX set to L (with Diver not in operation).

No.	Items	Modes	Input signals (Input point, waveform, standard and other measurement conditions)	Output signals (Measuring point, waveform and circuit explanations)	Measuring instruments	Specifications	Adjusting element name VR presetting position
1	Audio detection coil adjustment	TV	Synchronizing to 9ch, apply RF signals of monaural modulation (1kHz 100% (25kHz dev.))	Measuring point : TP*VREF, AFCIN The center meter reading should be zero when rated input is made.	Center Meter	0	L4452
2	Audio output level adjustment			Measuring point: Mother PCB TP*ALOUKT or AROUT or Measuring point: TVALR (BRG20 Pin 13 or Pin 14) Note: Applying DC-cutting coupling to the 13Pin and 14Pin, respectively, to the trailing end at 36.2Kohms.	mV Meter mV Meter	500mVrms 220mVrms	VR4453
3	SD adjustment			Measuring point:TP*USSD (BRG20 Pin 11) (1) DC voltage under 33 dBuV input	DC V Meter	2.5V ± 0.1V	VR4452
4	SD sensitivity check			Measuring point: TP*USSD (BRG20 Pin 11) The SD pin should be at "H" under 37dBuV The SD pin should be at "L" under 29dBuV	DC V Meter		
5	Diversity adjustment			Measuring point: TP*CNT 1/2*VDIV5 (about 2.5v) under rated input	DC V Meter	DIV5/2(1/2 VCC) ±0.1V	TC2401
6	Video output check			Measuring point: TVV (CN2471 Pin 4)	Oscilloscope	1Vp-p ± 0.2V	

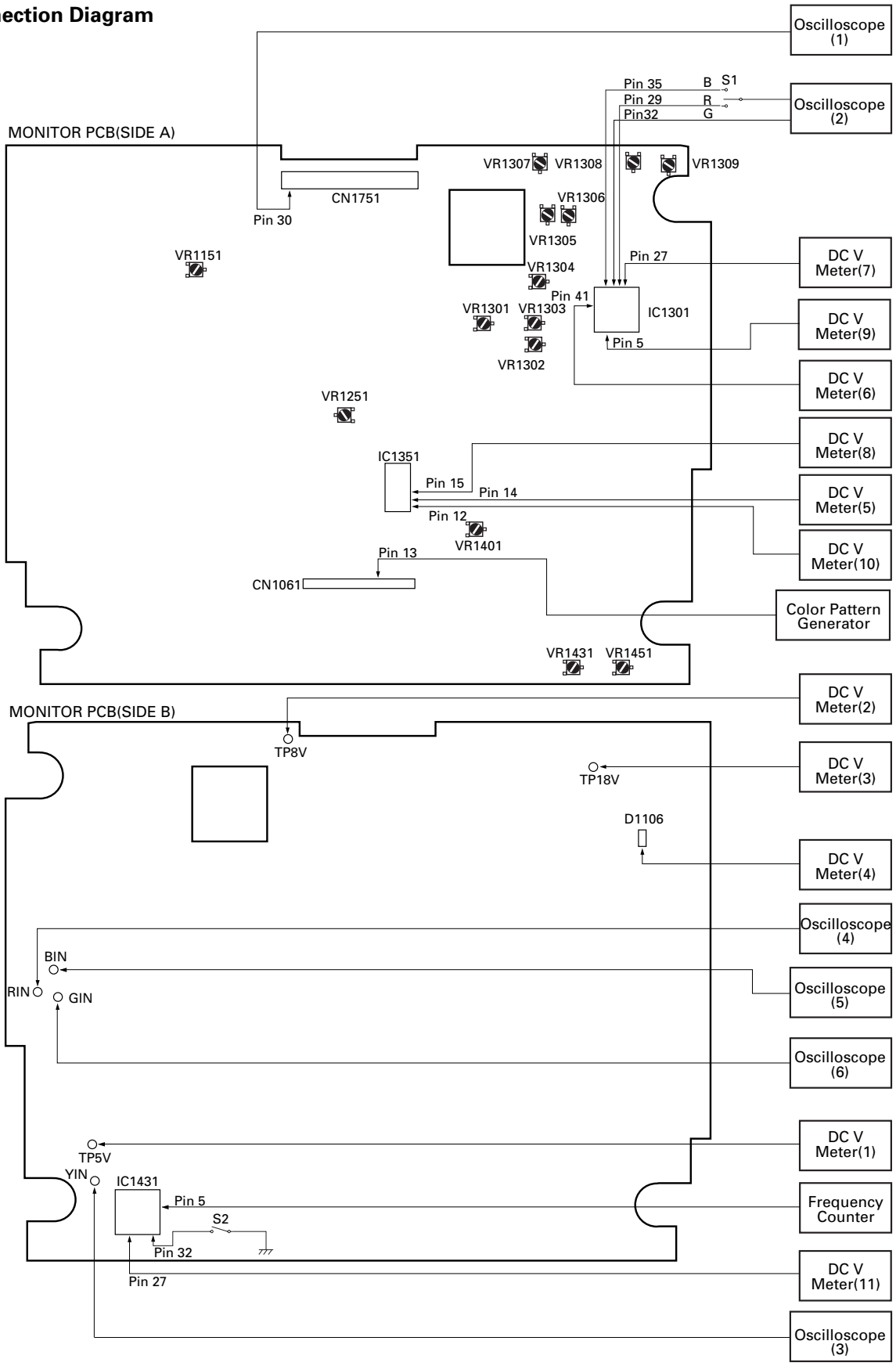
TRANSMITTER SECTION ADJUSTMENT

No.	Items	Modes	Input signals (Input point, waveform, standard and other measurement conditions)	Output signals (Measuring point, waveform and circuit explanations)	Measuring instruments	Specifications	Adjusting element name VR presetting position
1	Transmitter adjustment		*400Hz, 1Vrms.SIN audio inputting to the CN911, AUXAL and AUXAR *TX PW ON ES: 89.1MHz * VTR mode * FM transmitter level +6 * Adjustments and detections hereafter should be made under the aforementioned mode. Meanwhile, "1Vrms = 0dB"				
2	Transmitter supply voltage check			TP VTX9 TP VTX5	DC V Meter	9.0V ± 1.0V 5.0V ± 0.3V	
3	Input signal check			TP TXAL TP TXAR 	Oscilloscope	A : 2.8V ± 70mV	
4	19kHz filter adjustment and detection		* Audio input L, R: 19kHz	TP TXMPXL TP TXMPXR 		30mVp-p or less Should be suppressed to the minimum	VR401 VR402

No.	Items	Modes	Input signals (Input point, waveform, standard and other measurement conditions)	Output signals (Measuring point, waveform and circuit explanations)	Measuring instruments	Specifications	Adjusting element name VR presetting position
5	PLL lock adjustment		* Audio input: OFF	TP TXVC	DC V Meter	4.0V ± 0.2V Frequency: 89.1MHz ±10kHz	L471
6	RF output level adjustment		* Audio input: OFF	TP FMOUT  	Spectrum Analyzer	60 ±3dBμV 75Ω terminate Frequency: 89.1MHz ±10kHz	VR405
7	Stereophonic pilot adjustment		* Audio input: OFF	TP FMOUT  	Stereo receiver or Stereo Detector Spectrum Analyzer	7.5 ±1.5kHz (A: 14.0 ±0.3dB) Reference value	VR404
8	Modulation adjustment		* Audio input: 1Vrms, 400Hz	TP FMOUT  	Spectrum Analyzer	135 ±10kHz (A: 135 ±10kHz) Reference value	VR403

6.2 MONITOR SECTION ADJUSTMENT

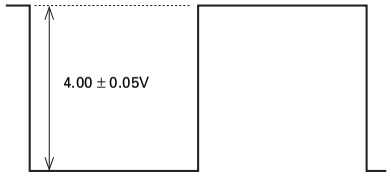
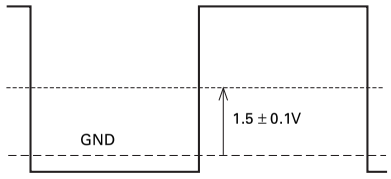
● **Connection Diagram**

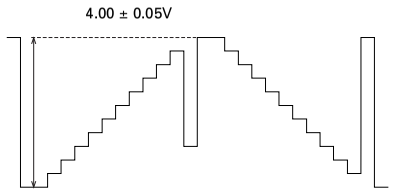
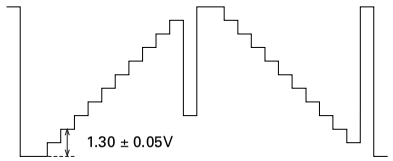
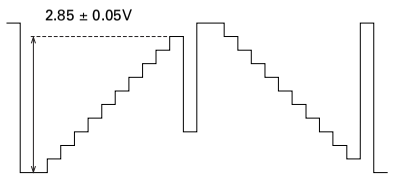


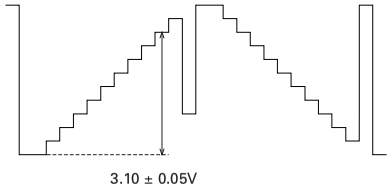
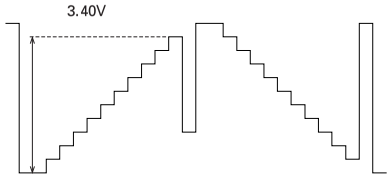
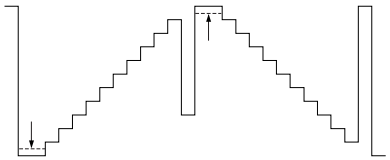
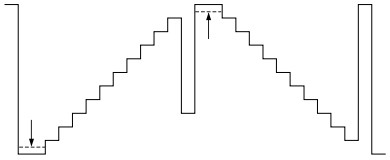
POWER SUPPLY SECTION VOLTAGE CHECK

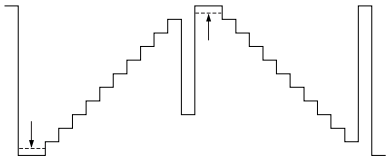
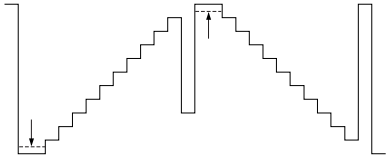
No.	Adjustment items	Measuring points	Adjustment points	Adjustment contents	Remarks
1	Power: ON				14.4V power will be supplied from the TP VVI TP MVIPW will be charged to "H" (5V)
2	5V adjustment	5V Line (TP TP5V)	VR1151	DC V Meter(1) 5.05V ± 0.05V DC	
3	8V check	8V Line (TP TP8V)		DC V Meter(2) 8.0V ± 0.5V DC	
4	18V check	18V Line (TP TP18V)		DC V Meter(3) 18.0V ± 1.0V DC	
5	-15V check	-15V Line (TP TPM15V)		DC V Meter(4) -16.0V ± 1.5V DC	

MONITOR SECTION ADJUSTMENT

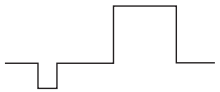
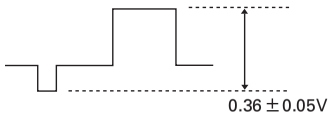
No.	Adjustment items	Measuring points	Adjustment points	Adjustment contents	Remarks
1	Bright voltage	IC1351 pin 14 (TP BRT2)	DAC output	DC V Meter(5) 2.55V ± 0.05(0.02)V DC	User bright can be +0 (Standard) (DAC control data = 130 (82ch)
2	Bright voltage check	IC1301 pin 41 (TP BRT)		DC V Meter(6) 2.20V ± 0.2V DC	
3	Gamma 2	IC1301 pin 27 (TP R2)	VR1308	DC V Meter(7) 3.0V ± 0.1V DC	
4	Contrast voltage 1	IC1351 pin 15 (TP CNT2)	DAC output	DC V Meter(8) 3.18V ± 0.05(0.02)V DC	User contrast can be +0 (Standard) (DAC control data = 163 (A3ch)
5	Contrast voltage 2	IC1301 pin 5 (TP CNT)	VR1301	DC V Meter(9) 2.67V ± 0.05V DC	
6	COM amp	IC1751 pin 30 (TP COM)	VR1301	Oscilloscope(1) 	
7	Coarse adjustment of the VCOM	IC1751 pin 30 (TP COM)	VR1251	Oscilloscope(1) 	

No.	Adjustment items	Measuring points	Adjustment points	Adjustment contents	Remarks
8	RGB amp	IC1301 pin 32 (TP GOUT)	VR1305	Oscilloscope(2) 10 step signal (Checker signal or test disc signal) 	
9	Bright voltage			DC V Meter(5) 1.60V ± 0.05(0.02)V DC	User bright can be +24 (Standard) (DAC control data = 82 (52h)
10	Bright voltage check	IC1301 pin 41 (TP BRT)		DC V Meter(6) 1.99V ± 0.2V DC	
11	Gamma 0	IC1301 pin 32 (TP GOUT)	VR1309	Oscilloscope(2) 10 step signal (Checker signal or test disc signal) 	
12	Bright voltage	IC1351 pin 14 (TP BRT2)	DAC output	DC V Meter(5) 2.55V ± 0.05V(0.02) DC	User bright can be +0 (Standard) (DAC control data = 130 (82h)
13	Bright voltage check	IC1301 pin 41 (TP BRT)		DC V Meter(6) 2.20V ± 0.2V DC	
14	Contrast voltage 1		DAC output	DC V Meter(8) 2.79V ± 0.05(0.02)V DC	User contrast can be -7 (Standard) (DAC control data = 143 (8Fh)
15	Contrast	IC1301 pin 32 (TP GOUT)	VR1301	Oscilloscope(2) 10 step signal (Checker signal or test disc signal) 	

No.	Adjustment items	Measuring points	Adjustment points	Adjustment contents	Remarks
16	Contrast voltage 1	IC1351 pin 15 (TP CNT2)	DAC output	DC V Meter(8) 3.18V ± 0.05(0.02)V DC	User contrast can be +0 (Standard) (DAC control data = 163 (A3h)
17	Gamma 2	IC1301 pin 32 (TP GOUT)	VR1308	Oscilloscope(2) 10 step signal (Checker signal or test disc signal)  	Observe the waveform of the 9th gradation.
18	Contrast check	IC1301 pin 32 (TP GOUT)		Oscilloscope(2) 10 step signal (Checker signal or test disc signal)  	Check if the contrast is 3.4V or more.
19	B sub-bright matching	IC1301 pin 32 (TP GOUT) and IC1301 pin 35 (TP BOUT)	VR1307	Oscilloscope(2)  Match the black level section of the G waveform and B waveform.	
20	R sub-bright matching	IC1301 pin 32 (TP GOUT) and IC1301 pin 29 (TP ROUT)	VR1306	Oscilloscope(2)  Match the black level section of the G waveform and R waveform.	

No.	Adjustment items	Measuring points	Adjustment points	Adjustment contents	Remarks
21	B sub-contrast matching	IC1301 pin 32 (TP GOUT) and IC1301 pin 35 (TP BOUT)	VR1304	Oscilloscope(2)  Match the 9th gradation of the G waveform and B waveform.	
22	R sub-contrast matching	IC1301 pin 32 (TP GOUT) and IC1301 pin 29 (TP ROUT)	VR1303	Oscilloscope(2)  Match the 9th gradation of the G waveform and R waveform.	
23	Aging			Inputting totally white screen signals (or moving pictures), leave as is for at least 30 minutes under operating state.	
24	Flicker adjustment	Screen	VR1251	Inputting black/white reversing signals for consecutive lines, adjust the flickering of the screen to the minimum.	

RGB DECODER SECTION ADJUSTMENT

No.	Items and modes	Input signals (Input point, waveform, standard and other measurement conditions)	Output signals (Measuring point, waveform and circuit explanations)	Measuring instruments	Specifications	Adjusting element name VR presetting position
	Preparations for adjustment and detection		TP 5V	DC V Meter(1)	5.0 ± 0.1V	
	Preparations for adjustment and detection	Check if "TP 5V" is at "5.0 ±0.1V.	TP COLOR TP HUE	DC V Meter(5) DC V Meter(10)	1.8 ± 0.1V 2.3 ± 0.1V	
1	Input level adjustment	Input 1Vp-p White 100% (without burst) to the TP CAVIDEO. 	 Adjust the input level to satisfy the above condition at the "TP YIN".	Oscilloscope(3)	0.36V ± 0.05Vp-p	VR1401
2	Free run f0 adjustment	Ground the "TP CIN". WHITE 100%	So adjust it that the oscillation waveforms of the "TP 461" may become 3.579545 MHz ±30Hz.	Frequency Counter	3.579545MHz ±30Hz.	VR1431
3	Sharpness adjustment	WHITE 100%	Adjust the sharpness to "3.6 ±0.1V" at the "TP SHP"	DC V Meter(11)	3.6V ± 0.1V	VR1451
4	RGB decoding signal check	Input 100% color bars (with burst) to the TP CAVIDEO. Keep the "TP RGBSEL" at 5V.	Check if 0.7Vp-p is detected at each TP RIN, TP GIN and TO BIN	Oscilloscope(4),(5),(6)	0.7V ± 0.1Vp-p	

7. GENERAL INFORMATION

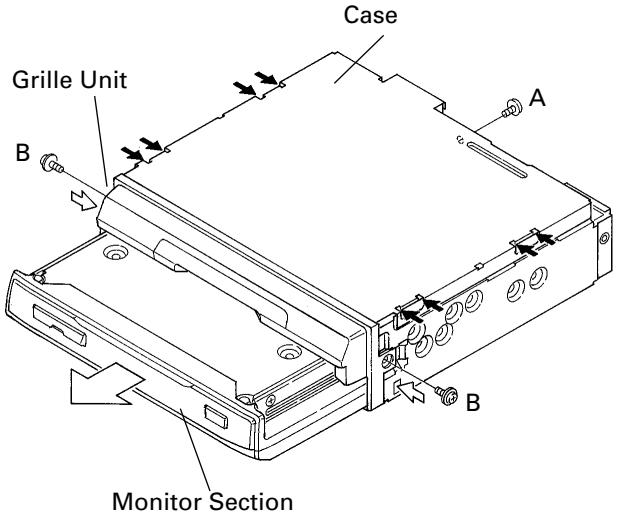
7.1 DISASSEMBLY

● Removing the Case

1. Remove the screw A.
2. Insert a pair of tweezers in the holes marked with black arrow to remove the case. Remove the case carefully because it is easily deformed.

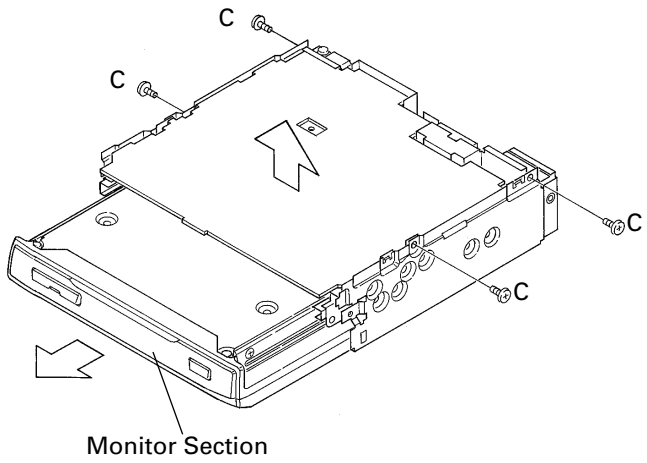
● Removing the Grille Unit

1. Pull out the monitor toward you.
2. Remove two screws B.
3. Remove the stoppers marked with white arrow to remove the grille unit.



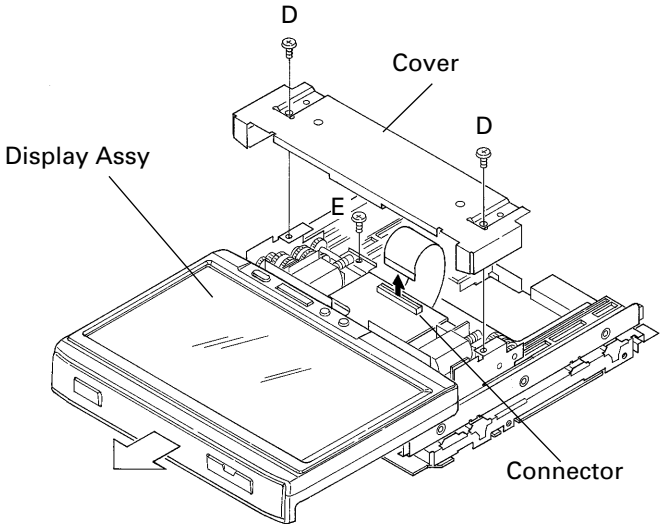
● Removing the Monitor Section

1. Pull out the monitor section until it comes to the stoppers.
2. Remove four screws C to remove the monitor section.



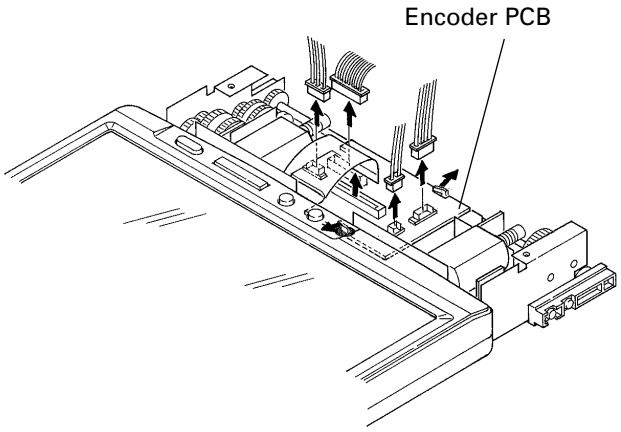
● Removing the Display Assy

1. Remove two screws D, screw E and the cover in this order.
2. Disconnect a connector and pull out the display assy toward you.



● Removing the Encoder PCB

1. Disconnect the six connectors illustrated below.
2. Unsolder the encoder PCB and the catches.
3. Straighten the two catches marked with arrow and remove the encoder PCB.

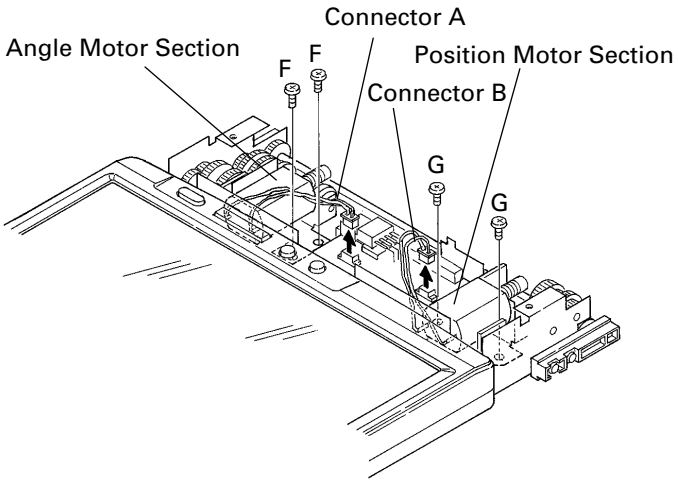


● Removing the Angle Motor Section

1. Remove the two screws F.
2. Remove the connector A before removing the angle motor section.

● Removing the Position Motor Section

1. Remove the two screws G.
2. Remove the connector B before removing the position motor section.

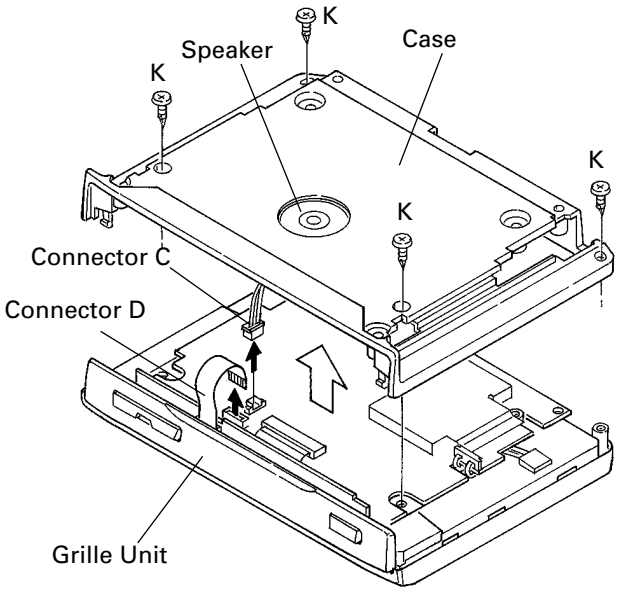


● Removing the Case

1. Remove the four screws K.
2. Remove the connector C before removing the case.

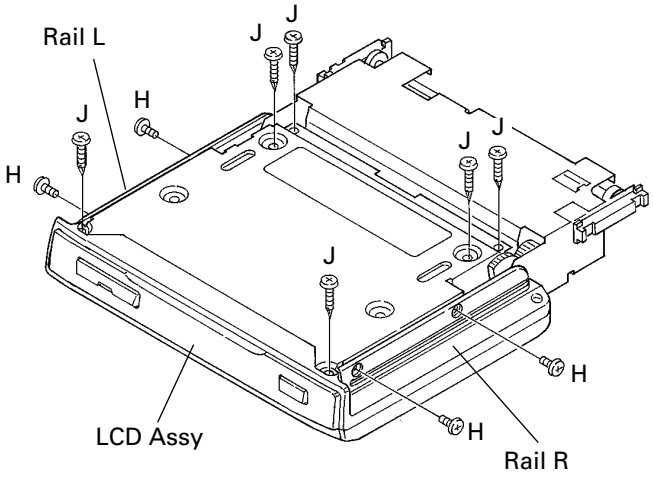
● Removing the Grille Unit

1. Remove the connector D before removing the grille unit.



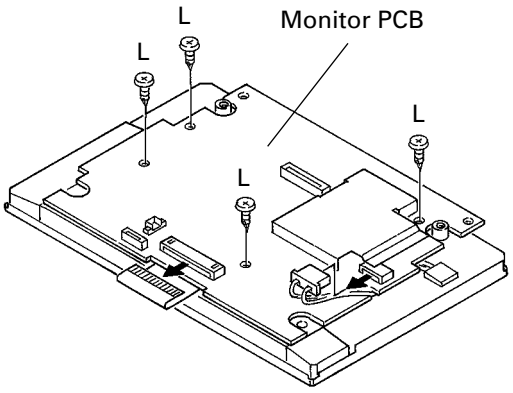
● Removing the LCD Assy

1. Unscrew the four screws H to remove the rail L and rail R.
2. Unscrew the six screws J to remove the LCD assy



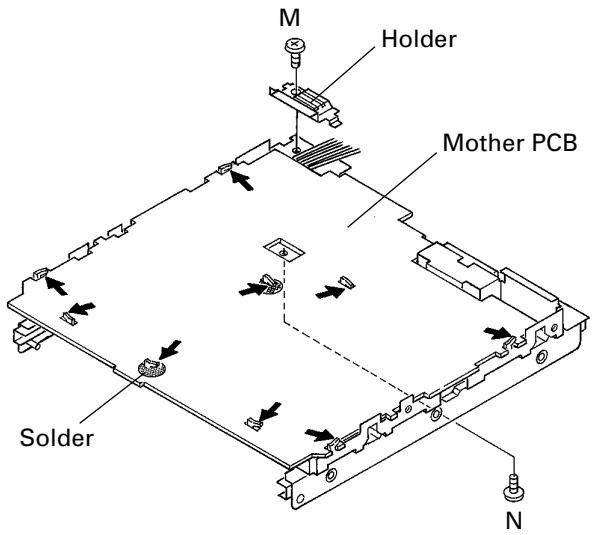
● Removing the Monitor PCB

1. Remove the four screws L and remove the two connectors before removing the monitor PCB.



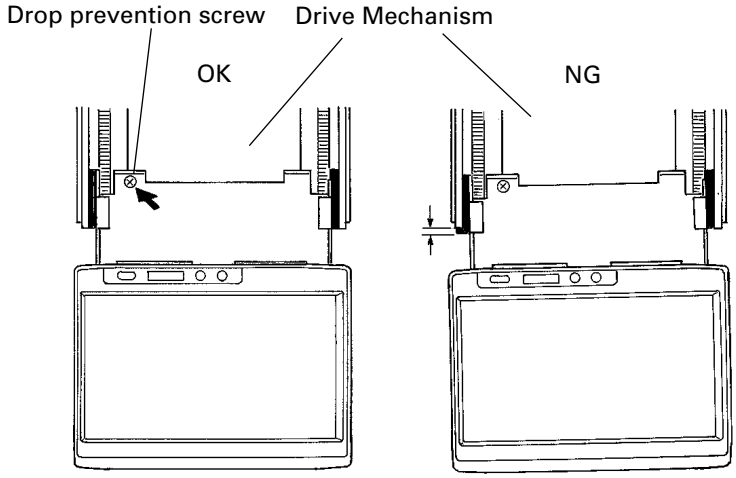
● Removing the Mother PCB

1. Remove the screw M to take off the holder.
2. Remove the screw N.
3. Unsolder the tuner PCB the catches.
4. Straighten the nine catches marked with arrow to remove the mother PCB.



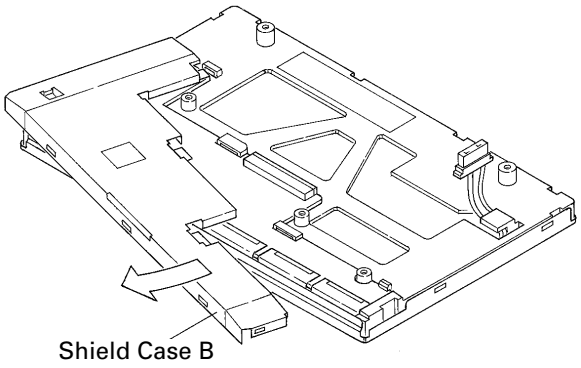
● Precaution in assembling the drive mechanism

1. Insert the drive mechanism in the right and left rail units equally to the both side. If inserted unequally, the drive mechanism will not operate normally.
2. The screw marked with arrow is for preventing the drive mechanism from dropping. Be sure to fasten the screw to prevent danger in case of car crash.



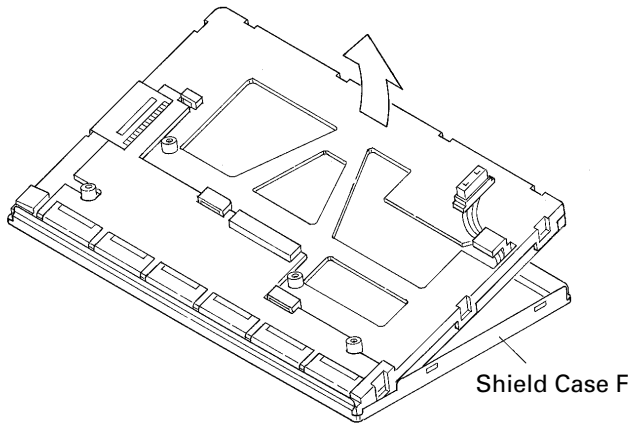
● Removing the Shield Case B

1. Free the front engagements at three places and right-hand side engagements at two places.
2. Using the left-hand side engagement as the fulcrum, turn the shielding case around rightward to remove it. When the shielding case does not come off smoothly, push the frame claw located in the center and the structure of the case at the engaging section toward the counter-clockwise direction. Furthermore, pushing the structure of the case at the engagement with the frame of the case at two places downward will facilitate separation of the case.



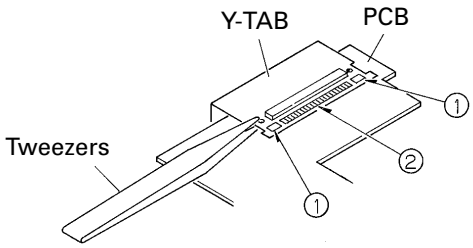
● Removing the Shield Case F

1. Remove the shielding case "F" toward the opposite side to the X-TAB.



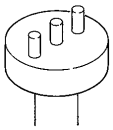
● Removing the Y-TAB

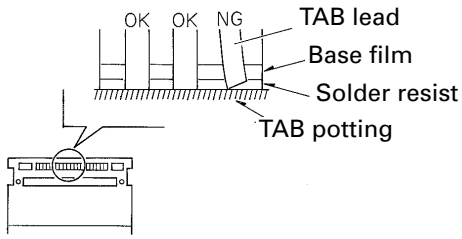
1. Raise the reinforcement land section.
2. Raise the soldered section located in the center. When doing this, since the folded TAB tends to jump up, hold the Y-TAB using a pair of tweezers.
3. After freeing the TAB, check and make sure the TAB lead is not cut using a magnifying glass.



● Precautions

1. Since the TAB can be cut very easily, pay great attention when handling it.
2. Always provide a marking (dot) to represent the number of times the TAB is removed.
3. The TAB should only be removed up to three times.
4. When releasing the part from the soldered state, always use a blower (HS-550 with tip-end shape HS553, manufactured by HOZAN).





● Install the Y-TAB

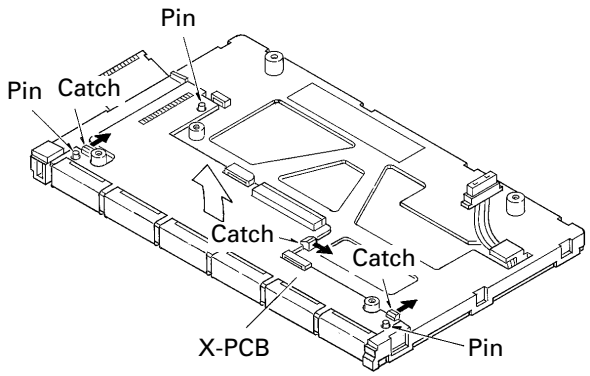
1. Supplement the solder by applying flux to the solder land on the PCB side.
2. Since the rear side of the TAB lead tends to form a square hole after the TAB has been removed, smooth out the solder using a soldering iron.
3. Solder the reinforcement lands on both sides.
4. Solder all over the central area.

Precautions

1. Use a soldering iron with a pencil-shaped head.
2. Maintain the temperature of the soldering iron at around 320 degrees C .

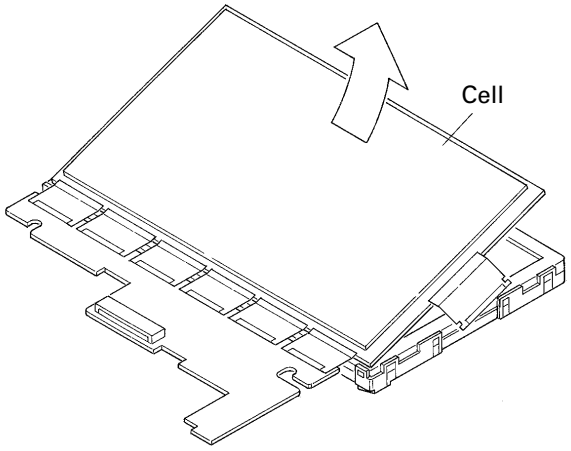
● Removing the X-PCB

1. Release three catches on the frame.
2. Pull out the pins from frame holes and remove the X-PCB.



● Removing the Cell

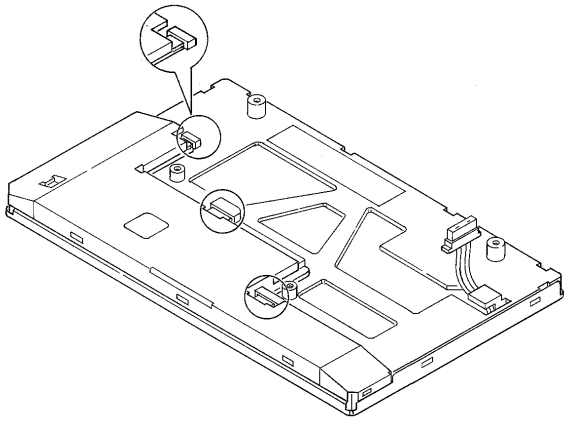
1. Remove the cell from the backlight picking up the periphery.



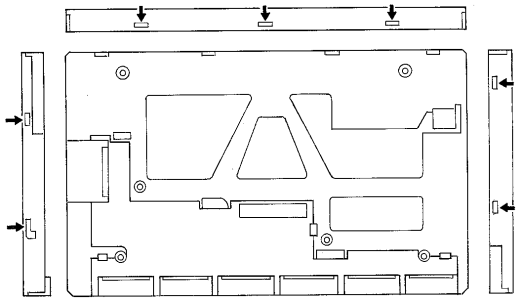
● Precautions

1. Three frame catches hold the end faces of the PCB.
2. Do not catch the PCB aslant to prevent the TAB from being stressed.
3. The frame pins shall be set in the PCB positioning holes at three places.

Setting of shielding case



Catch engaging points



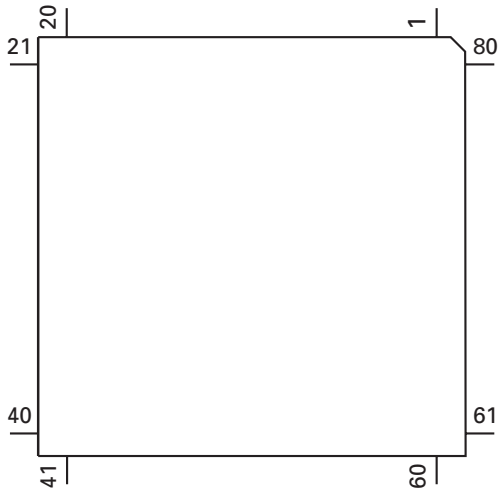
7.2 IC

● **Pin Functions (PE5162A)**

Pin No.	Pin Name	I/O	Function and Operation
1	RGBSEL	O	Video input select output
2	PWFL	O	Back-light power control output
3	MTRPW	O	AV flap motor power control output
4	AVSS		A/D converter grounding potential
5	EVOL	O	Monitor speaker volume control output
6	ATXLEV	O	(OPEN) (Not used)
7	AVREF1		D/A converter reference voltage input
8	MTRS	O	AV flap motor speed adjusting output
9	MTRSEL	O	AV flap motor forward rotation output and reverse rotation output
10	MTR2	O	AV flap position motor output
11	MTR1	O	AV flap angle motor output
12	OSDDT	O	OSD serial data output
13	OSDCK	O	OSD serial clock output
14	OSDCS	O	OSD chip select output
15	PWVI	O	Video power supply control output
16	TESTDATAIN	I	Test mode data input
17	TESTDATAOUT	O	Test mode data output
18	TESTDATACLOCK	I	Test mode clock output
19	RGBARI		(PULL UP) (Not used)
20	IP/AD	I	Operation mode changeover switch input
21	IOPULS	I	AV flap horizontal position detecting pulse input
22	DEG0SW	I	AV flap 0-degree detecting switch input
23	LIFTSW	I	AV flap angle raising starting switch input
24	DEPULS	I	AV flap angle detecting pulse input
25	SD/ST	I	Station detector input
26	BILSEN		(PULL UP) (Not used)
27	MUTEV	O	Video mute output
28	DACRST	O	External DAC resetting output
29	SCL	I/O	12C-BUS clock output
30	SDA	I/O	12C-BUS data output, acknowledge input
31	MUTEAU	O	Stereophonic audio mute output
32	MIXSP		(OPEN) (Not used)
33	VSS		Microcomputer grounding potential
34	MUTESP	O	Monitor SP audio mute output
35	MAIN/SUB		(OPEN) (Not used)
36	NC		(OPEN) (Not used)
37	NC		(OPEN) (Not used)
38	NC		(OPEN) (Not used)
39	NC		(OPEN) (Not used)
40	SEEK	O	SEEK output
41	PLLDT	O	PLL data output for the TV tuner
42	PLLCS	O	PLL chip select output for the TV tuner
43	PLLCK	O	PLL clock output for the TV tuner
44	MONO	O	(OPEN) (Not used)
45	PEE	O	PEE audio output
46	TXCK	O	PLL clock output for the FM transmitter
47	TXDT	O	PLL data output for the FM transmitter
48	TXCS	O	PLL chip select output for the FM transmitter
49	MUTETX	O	Audio mute output for the FM transmitter
50	TXPW	O	Power control output for the FM transmitter
51	GION	I	(PULL DOWN) (Not used)
52	MUTEPS		(OPEN) (Not used)
53	ILMPW	O	Illumination power control output
54	OPSEN		(PULL UP) (Not used)
55	IPPW	O	IP-BUS driver power control output

Pin No.	Pin Name	I/O	Function and Operation
56	TX	O	IP-BUS data output
57	RX	I	IP-BUS data input
58	PBSEN	I	Parking brake detecting input
59	ILMSEN	I	Vehicle illumination sensor input
60	RESET	I	Resetting input
61	REMIN	I	Remote controller input
62	BSENS	I	Backup sensor input
63	ASENS	I	Acc sensor input
64	DSEN	I	Detach sensor input
65	SWACPW	O	Key power control output
66	SYSPW	O	System power control output
67	TVPW	O	TV power control output
68	VDD		Positive power for the microcomputer
69	X2		Microcomputer system clock oscillating crystal connector
70	X1		Microcomputer system clock oscillating crystal connector
71	IC		Connecting to the microcomputer grounding potential
72	XT2		Sub-clock input (Unconnected)
73	TESTIN	I	Chip test input
74	AVDD		A/D converter analog power
75	AVREF0		A/D converter reference voltage input
76	GAIREF	I	Outside light sensor threshold value input
77	SL	I	Signal level input
78	KDT0	I	Key sense input 0
79	KDT1	I	Key sense input 1
80	LSEN	I	Outside light sensor input

*PE5162A

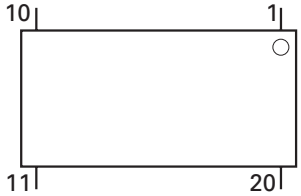


IC's marked by* are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

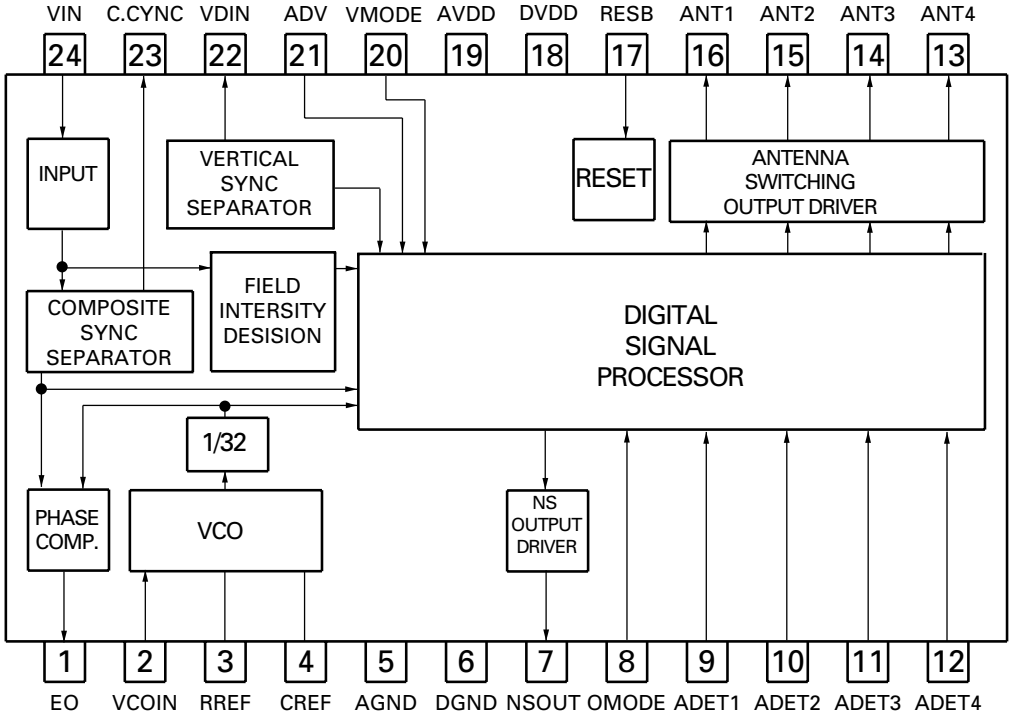
● **Pin Functions (PD5582A)**

Pin No.	Pin Name	I/O	Function and Operation
1	OSC1	I	Pin for external connection of oscillation circuit for display
2	OSC2	O	Pin for external connection of oscillation circuit for display
3	$\overline{CS}$	I	Chip select input
4	SCK	I	Serial clock input
5	SI	I	Serial data input
6	$\overline{AC}$	I	Auto-clear input
7-10	P6-P9	O	Port output
11	VSS		Grounding
12	P0	O	Port output
13	P1/R	O	Port output or R-output
14	P2	O	Port output
15	P3/G	O	Port output or G-output
16	P4	O	Port output
17	P5/B	O	Port output or B-output
18	HOR	I	Horizontal synchronizing signal input
19	VERT	I	Vertical synchronizing signal input
20	VDD		Positive power supply terminal

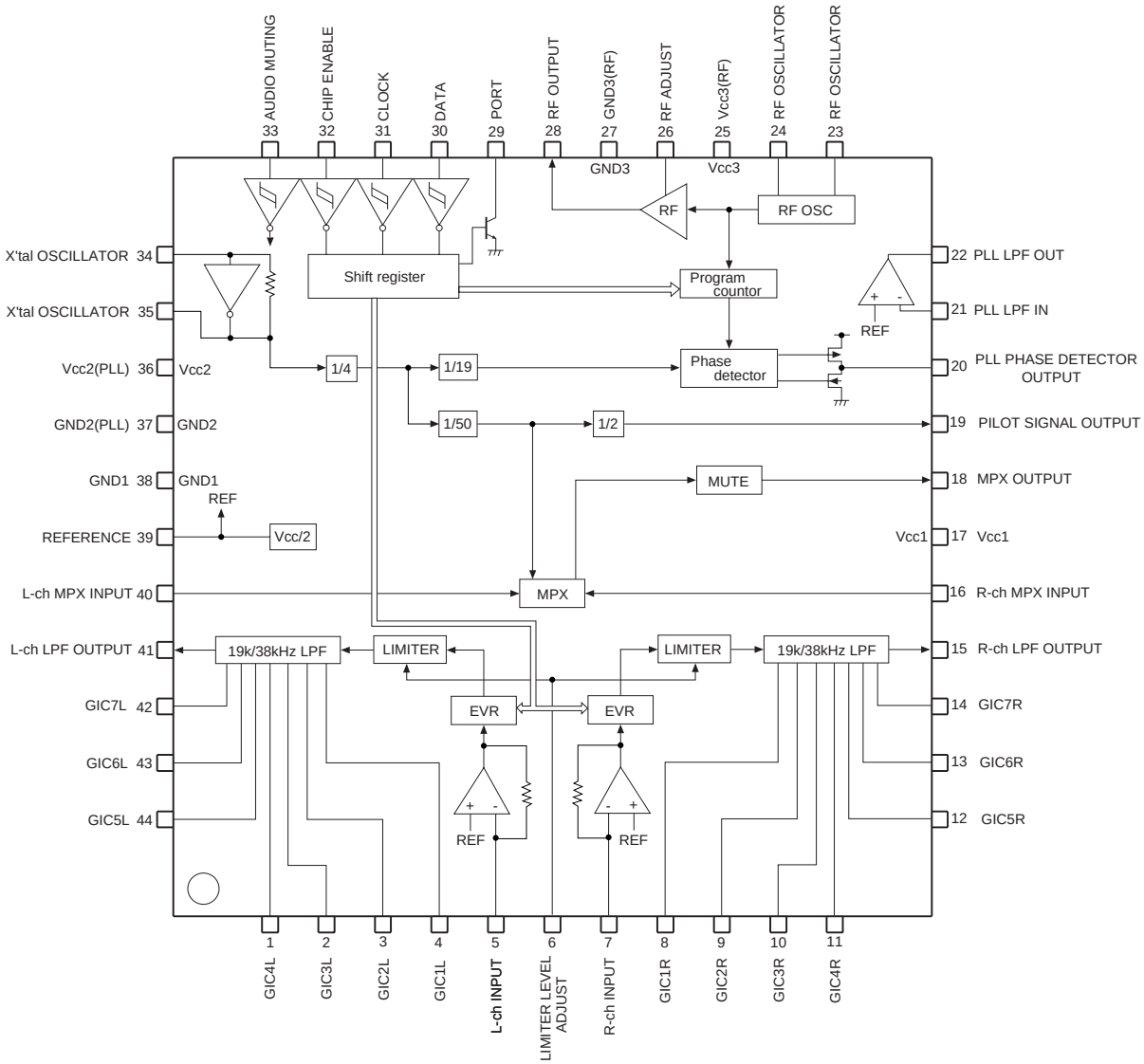
*PD5582A



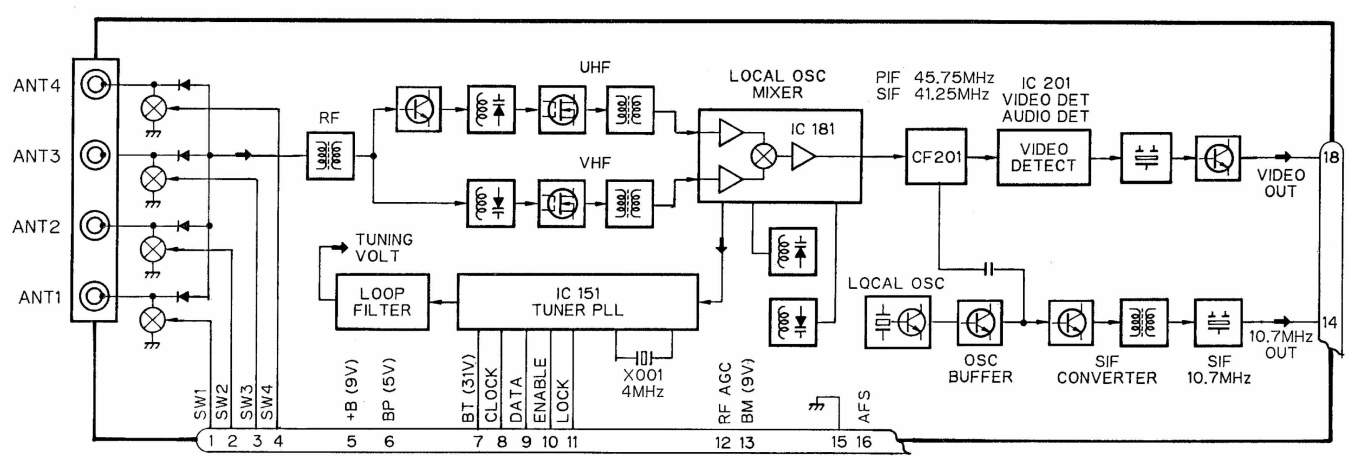
CA0018AM



BH1414K



● TV Front End(FE4401:CWB1085)



7.3 MECHANISM DESCRIPTION

● Hardware Description

Drive Motor
- Eject (position) motor
- Angle raising (angle) motor

Sensor
- Angle detection rotary encoder
- Eject detection rotary encoder
- Eject end detection switch (At detecting time : L)
- Angle 0 Detection switch (At detecting time : L)

● Electrical Conditions

Sensor Signals
- Encoder Pulses
- DEGPUL : Angle pulse sensor
- IOPUL : Eject pulse sensor

Sensor Signals
- LIFT SW : Eject end sensor (At detecting time : L)
- DEG 0 SW : Angle 0 sensor (At detecting time : L)

Control Signals
- MTRPW : Motor power control (at ON time : H)
- MTR1 : Angle motor control signal (At driving time :H)
- MTR2 : Eject motor control signal (At driving time : H)
- MTRS : Motor speed control (At high speed time : L, At low speed time : H)
- MTRSEL : Motor turning direction control (At forward rotation time : *, At reverse rotation time : *)

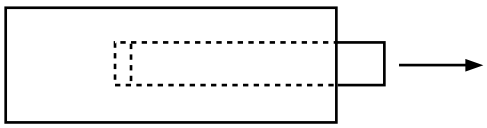
Motor terminal voltage
- High-speed mode : VMH=7.0V
- Low-speed mode : VML=6.2V

● Operation Description

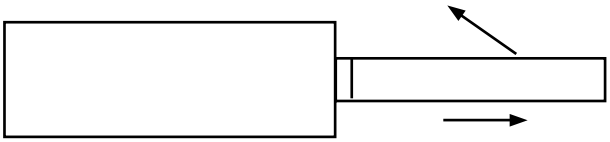
1. For the operation, two motors for forward/backward drive and for angle control are used.
2. The photo interrupter detects pulses and counts them in order to detect respective operation states and operating positions.
3. At the time of starting after resetting, the storing state proceeds to the ejecting operation again and to the starting state.
4. Angles are adjusted with the angle adjustment key
5. When the OPEN key is pressed again (or when ACC is set to OFF (when the automatic open/close setting is ON), the storing operation starts.

● Ejecting Operation

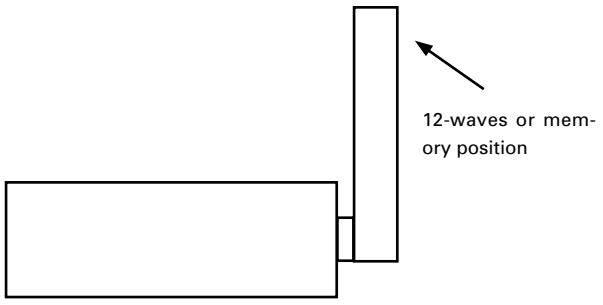
1. Press the OPEN key or when the ACC is set to ON, the position motor will start operating in the high-speed mode.



2. When the longitudinal position sensor switch (LIFT SW) is set from H to L, the position motor will stop and the angle motor will start operating at high speed at the same time.



3. When the angle encoder pulse reaches 12-waves, the angle motor will stop. (Brake mode) When the previous angle has been stored, the angle motor operates up to the angle.



4. When making settings for "setback ON", after the angle has reached to the prescribed position by the movement according to the above Paragraph 3, move the position motor toward the storing direction at a low speed after waiting for about a second. When the motor returns, it will be stop mechanically and braking movement will be activated by the error timer or by the effective edge of he angular encoder.

● Storage operation

1. Operating the CLOSE key (or, when the automatic open-close setting is being turned ON, 6 seconds after turning OFF the ACC), move the position motor forward at the low speed until the LIFT switch is turned OFF.
2. When the LIFT switch has been turned OFF, stop the position motor and move the angle motor at a low speed.
3. When the angular direction SENSE switch (Angle "0" degree switch) is turned ON and when the angle pulse has disappeared, stop the angle motor and move the position motor at high speed. When a mechanical contact is made and the storage movements have been completed, the movement will stop by the function of the error timer.

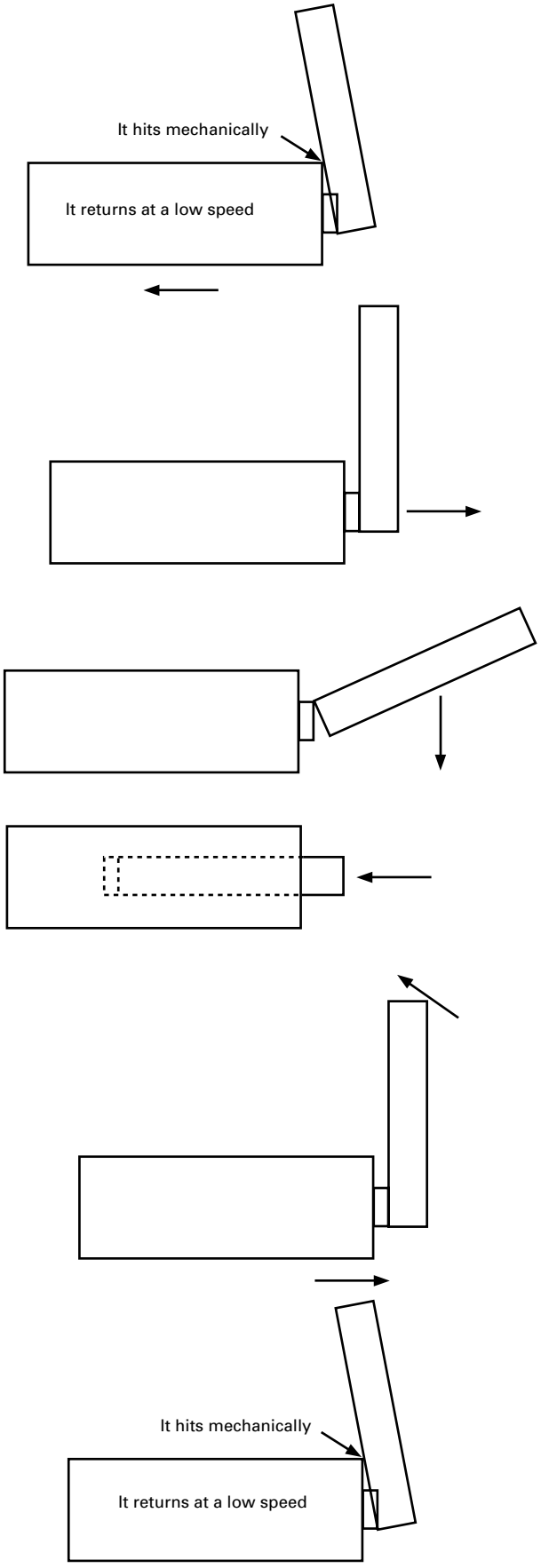
● Angular adjustment

1. If, for example, the UP key is pressed from the initial position (about 90 degrees), move the position motor at high speed as far as the tip end. One second after the forward and backward pulses disappear, move the angle motor under the low speed mode for the equivalence of 1-wave of the angular pulse before going into the braking mode.
2. Then, after about 3 seconds from the above state, move the position motor at low speed to stop (braking mode) at the point where the forward and backward pulses disappear. Operations are the same when DOWN key is pressed.

Notes)

Position motor: The motor which works to drive the display toward the forward and backward directions.

Angle motor: The motor which works to drive the display toward the raising and lowering (angular) directions.

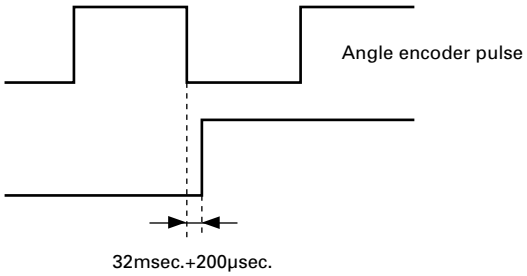


● Precautions

1. For angle position, addition and subtraction are repeated and the final position is stored for the next starting.

2. If the specified pulse is not available during operation, an abnormal operation will be detected and the position motor will stop at the position.

3. After detecting the specified angle pulse L, the brake will work for 32msec.+200µsec.



● Drive Operation in the Setting Mode

Setting Mode

Automatic Open/Close : ON

ACC operation mode	OPEN State or ACC OFF State	In opening or ACC OFF State	In closing or ACC OFF State	CLOSE State or ACC OFF State
ACC OFF→ON	OPEN State ↓ OPEN as it is	•••••	•••••	CLOSE State ↓ OPEN operation
ACC ON→OFF	OPEN State ↓6 sec CLOSE	OPEN operation continue ↓ CLOSE operation ↓ CLOSE	CLOSE operation continue ↓ CLOSE	CLOSE State ↓ CLOSE as it is
Final memory	OPEN	OPEN	CLOSE	CLOSE

Setting Mode

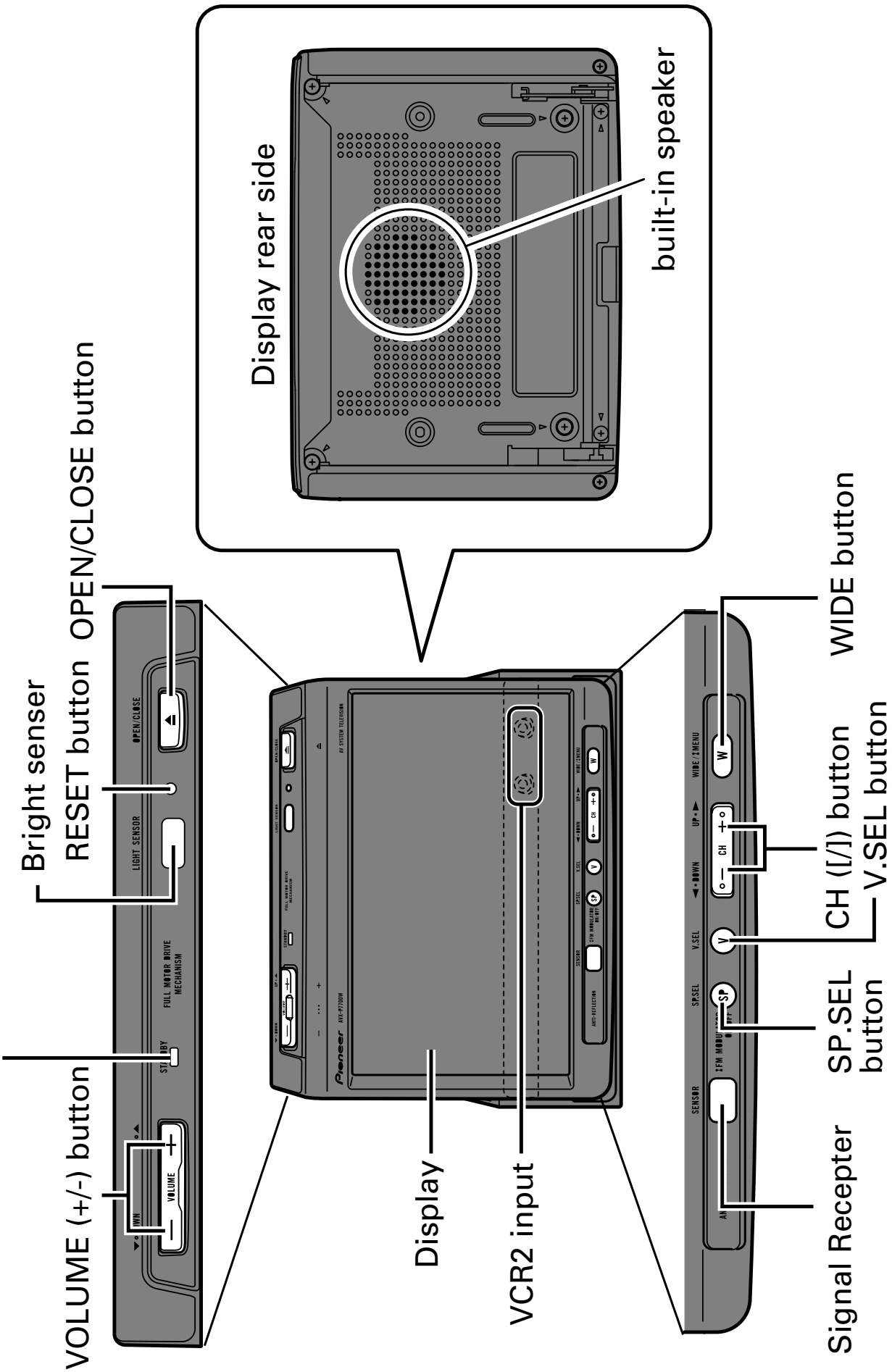
Automatic Open/Close : OFF

ACC operation mode	OPEN State or ACC OFF State	In opening or ACC OFF State	In closing or ACC OFF State	CLOSE State or ACC OFF State
ACC OFF→ON	OPEN State ↓ OPEN as it is	•••••	•••••	CLOSE State ↓ CLOSE as it is
ACC ON→OFF	OPEN State ↓ OPEN as it is	OPEN operation continue	CLOSE operation continue ↓ CLOSE	CLOSE State ↓ CLOSE as it is
Final memory	OPEN	OPEN	CLOSE	CLOSE

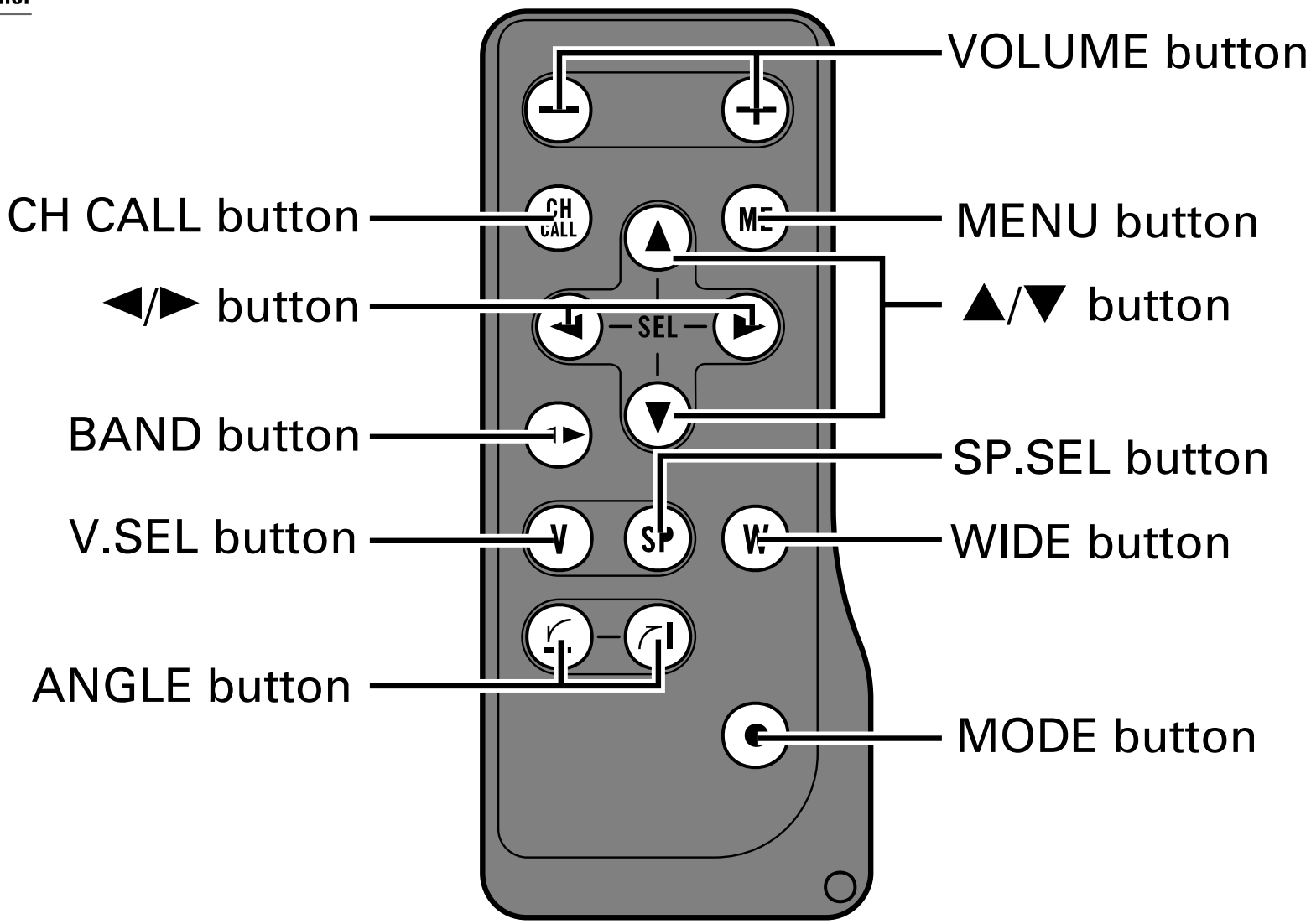
8. OPERATIONS AND SPECIFICATIONS

Display Unit

The following diagram shows the display when it is deployed.



Remote Controller



Note:

- Only the VOLUME, RESET and ⏏ buttons will work when the display is stored in the main body. Lift up the display to operate the other buttons.
- Each time the MODE button is pressed for 2 seconds or more, the head unit and this product will switch to the operating mode. Head unit volume adjustment and band switching can be performed by switching to the Head Unit mode.

Direct Recall

- **Press one of buttons 1–6 to recall a station preset under that button.**

Note:
- To recall Preset channels 7–12, perform Preset Tuning with ▲/▼ buttons.

Entering the Function Menu

- **Press the FUNCTION button to select the desired mode in the Function Menu.**

Each press of the FUNCTION button selects the mode in the following order:
FUNC 1 (Preset Scan/BSSM) → FUNC 2 → FUNC 3 → FUNC 4 → AUTO/MANUAL (Switching the Tuning Mode)

Note:
- In FUNC 1, Preset Scan or BSSM is selected by changing the length of time you press the ▲/▼ button.
- There are no functions in FUNC 2, FUNC 3 or FUNC 4.

Preset Scan

This lets you view up to 12 stations stored in the Preset Channels one after the other.

Switching the Tuning Mode

You can select between Manual Tuning (MANUAL) and Seek Tuning (AUTO). Press the ◄/► button and tuning is performed in the selected tuning mode.

Using the PGM Button

The PGM (PGM/DSP) button operates in a different way depending on the function programmed (memorized). (For details concerning programming the PGM (PGM/DSP) button, refer to the Head Unit's operation manual.)

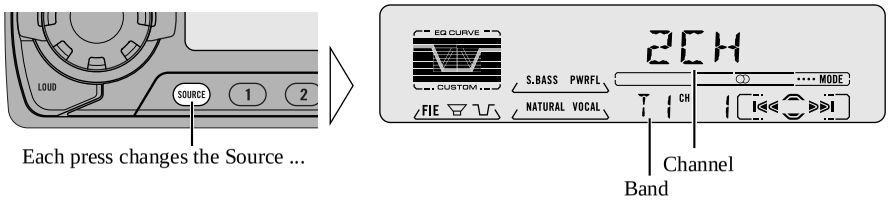
- **Press the PGM (PGM/DSP) button.**

Function	Press	Hold for 2 seconds
Preset Scan/BSSM (FUNC1)	Preset Scan ON/OFF	BSSM ON/OFF
Switching the Tuning Mode (AUTO/MANUAL)	Select	____

Switching the Source

AUDIO MASTER MODE

1. Select the TV source on the Head Unit.



(e.g. DEH-P5250)
Built-in CD player → TV → Tuner → Multi-CD player → External Unit → AUX

To switch the sources OFF, hold down the SOURCE button for 1 second or more.

Note:
- A selected audio source can be output with "AUDIO SELECT" of "IN/OUT SETTING," even when a TV source has been selected.
- A selected video source can be displayed with V.SEL button, even when a TV source has been selected.
- When reception is weak, video images may be disrupted when viewing TV broadcasts.
- TV reception may become bad in such places as inside of tunnels, behind mountains or between buildings.

TV MASTER MODE

When using this product for the first time, refer to “FM MODULATOR”, and set the frequency.

1. **Select the desired Video source in the following order:**

TV → VCR1 → VCR2

2. **Switch to an FM source on your car stereo with FM reception capability, and tune to the frequency set in “FM MODULATOR”.**

Note:
- You can switch VCR1 or VCR2 only when “SELECT” is selected in “IN/OUT SETTING”.
- The video from VCR1 or VCR2 “SELECT” in “IN/OUT SETTING” can be switched with the V.SEL button but the audio from the external speaker remains as selected with “AUDIO SELECT.”
- The FM MODULATOR setting is alternately turned on and off each time the SP.SEL button of the display unit is pressed for 2 seconds or more.
- If it is hard to hear the output sound, it may be due to interference from a strong FM broadcast.
- Even if you switch this product OFF, the FM car stereo remains switched ON.

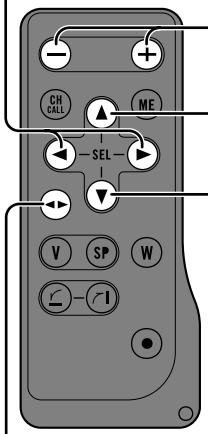
Basic Operation of TV Tuner

Manual and Seek Tuning

- **You can select the tuning method by changing the length of time you press the ◄/► button.**

Manual Tuning (step by step)	0.5 seconds or less
Seek Tuning	0.5 seconds or more

Note:
- If you continue pressing the button for longer than 0.5 seconds, you can skip broadcasting stations. Seek Tuning starts as soon as you stop pressing the button.



Built-in speaker volume adjustment

When the built-in speaker is set to ON, the volume adjustment can be made from 0-30.

Preset Tuning

- **You can recall memorized stations.**

AUDIO MASTER MODE:

You can memorize and recall stations using buttons 1–6 in the same way as with Head Unit tuner Preset Tuning.

Band

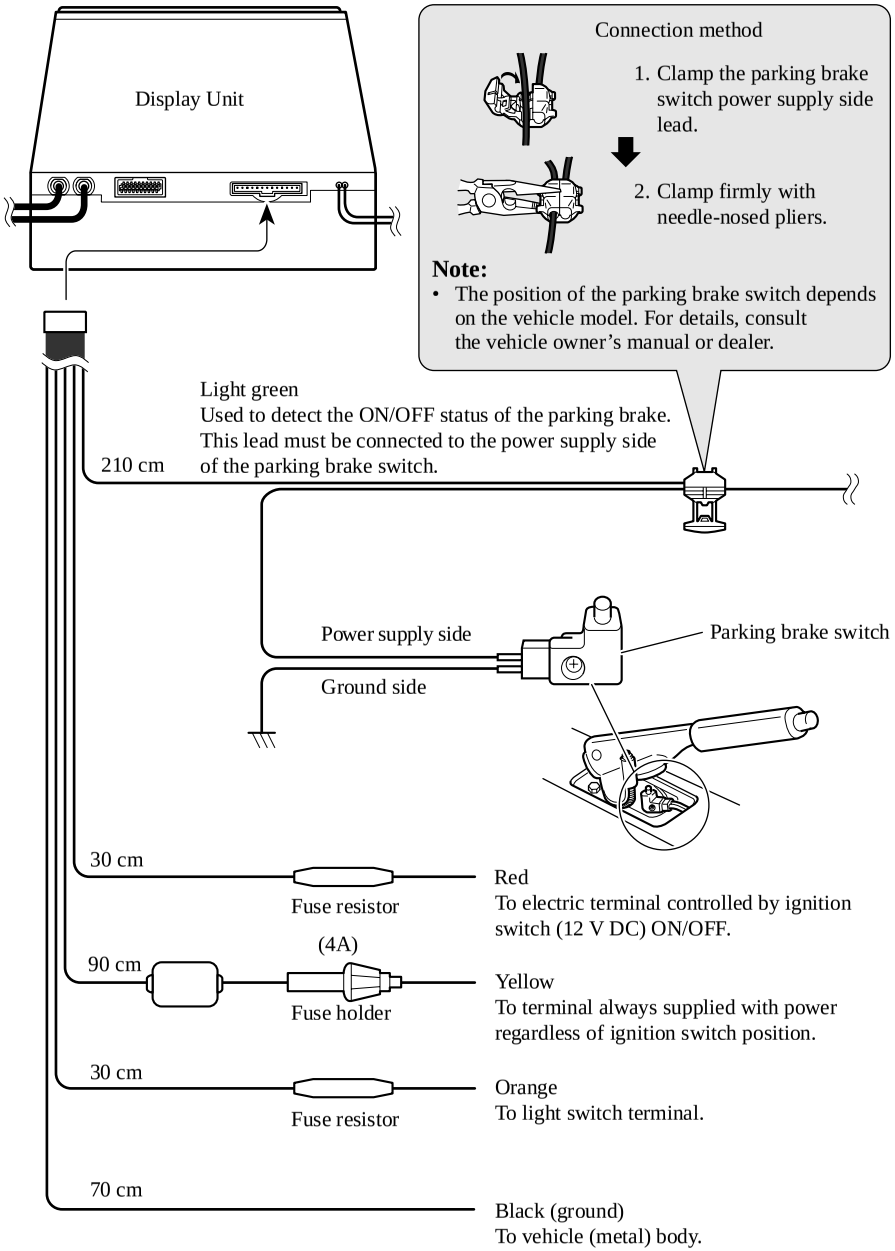
TV1 → TV2

AUDIO MASTER MODE

Operation is possible with the BAND (◄►) button of the head unit and the head unit remote controller.

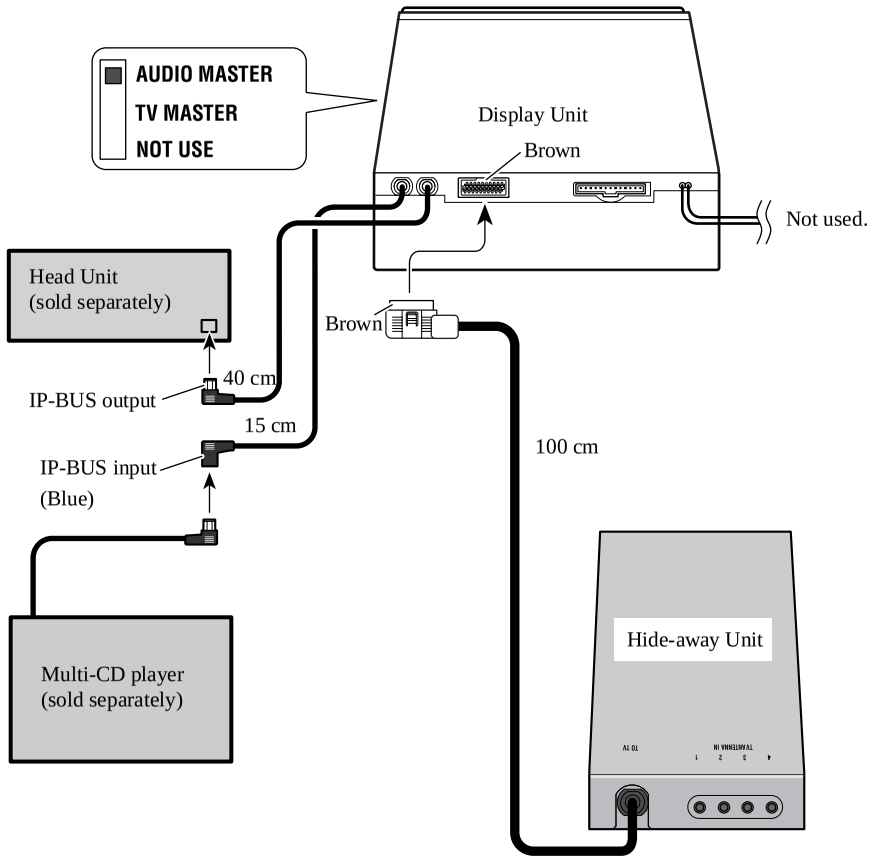
Note:
- Manual and Seek Tuning operation is possible with the CH (◄/►) button of the display unit.

Connecting the Power cord

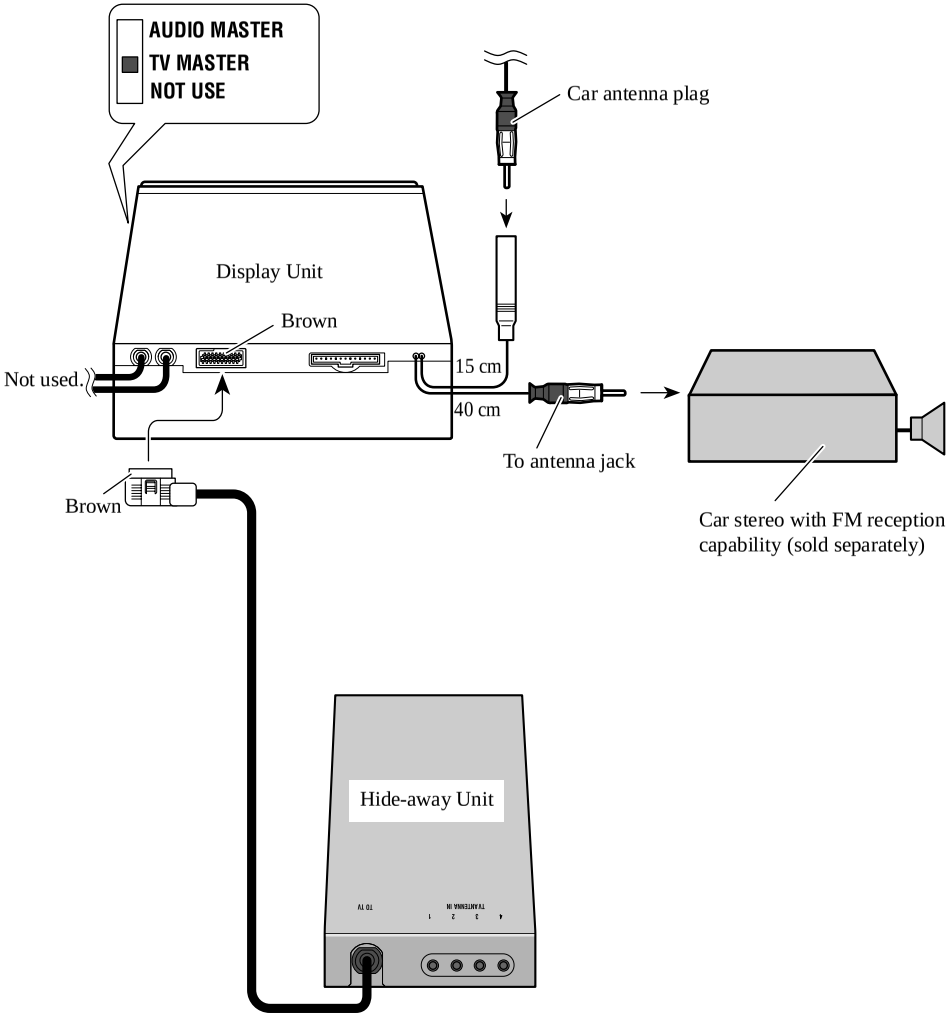


Connection Diagram

■ When connecting the Head Unit

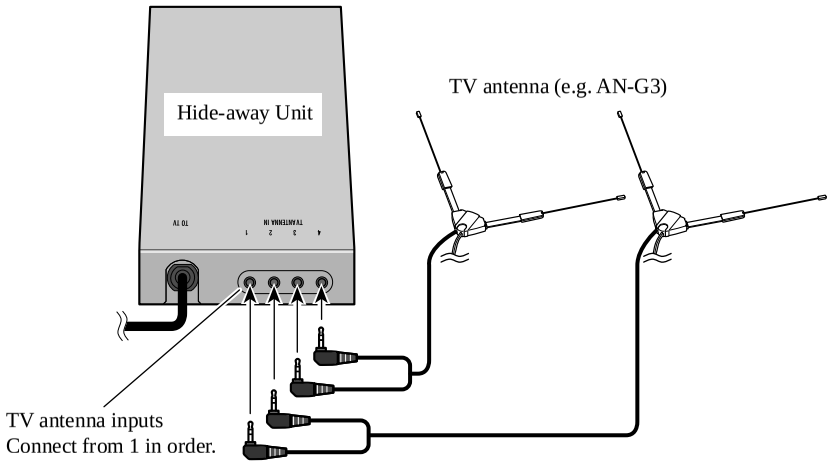


■ **When connecting a car stereo with FM reception capacity**



TV Antenna Connection

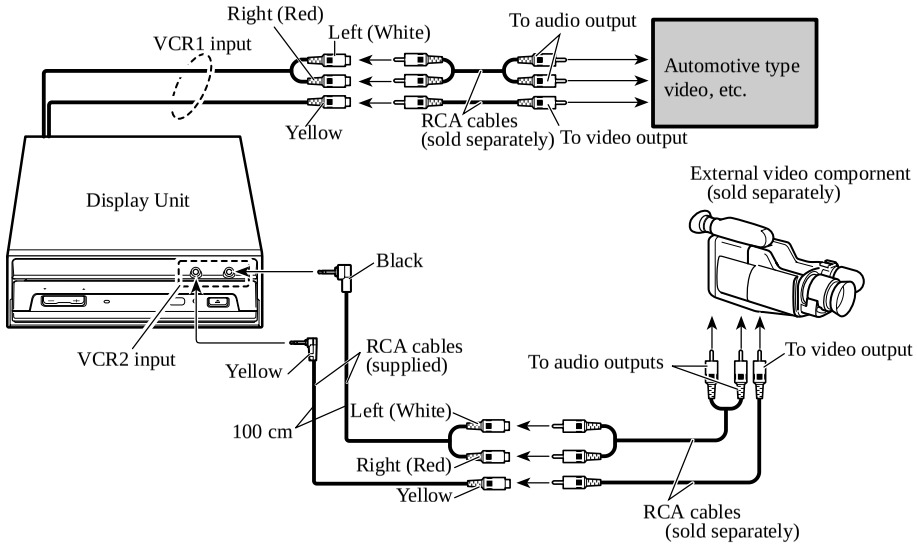
■ **When connecting the TV Antenna (e.g. AN-G3)**



Connecting the Units

External Video Components Connection

The display unit has a VCR1 input and a VCR2 input.
The VCR1 input is used to connect an external video component using RCA cables (sold separately).
The VCR2 input is used to connect an external video component using the RCA cables (supplied).



Note:
- When connecting a video, etc., to the VCR2 input, use clamps to fasten the RCA cable (supplied) in position.
- Use the VCR1 input to connect an automotive type video, etc.
- This product is NTSC system compatible. When connecting an external component to this product's VCR1 or VCR2 input, be sure the component is compatible with the same video systems. If it is not, images will not be correctly reproduced.

Specifications

General

Power source ..... 14.4 V DC (10.8 - 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 2.0 A

Display

Screen Size/Aspect Ratio ..... 7 inch Wide/16:9
Effective Display Area ..... 87 × 154 mm
Pixels ..... 336,960 (234 × 1,440)
Display Method ..... TFT Active Matrix Driving
Color System ..... NTSC Compatible
Operating Temperature Range ..... –10 - +50 °C
Storage Temperature Range ..... –20 - +80 °C
Speaker ..... ϕ 36 mm

TV tuner

Reception Channel/TV System ..... US/M: VHF 2 - 13 ch/UHF 14 - 69 ch
Usable sensitivity ..... 15 dBμ (75Ω, MONO)
Video S/N ..... Over 40 dB (59 dBμ RF Input, White Peak 100 %)
Video S/N 30 dB usable sensitivity ..... 40 dBμ
Video input level ..... 1 Vp-p/75 Ω
Antenna input ..... 4 ch Diversity (ϕ 3.5 mm Mini plug type)
FM Modular Frequency ..... 87.9 - 90.1 MHz (0.1MHz, 23 steps)
External Volume Maximum Input Level 1V/22kΩ

Dimensions

Display Unit (Chassis) ..... 178 (W) × 50 (H) × 165 (D) mm
(Nose) ..... 172 (W) × 47 (H) × 20 (D) mm
(Monitor) ..... 171 (W) × 128 (H) × 24 (D) mm
Hide-away Unit ..... 95 (W) × 25 (H) × 156 (D) mm
Remote Control ..... 40 (W) × 92 (H) × 6 (D) mm

Weight

Display Unit 1.7kg
Hide-away Unit 450g
Remote Control 20g

Note:
- Specifications and the design are subject to possible modification without notice due to improvements.